IRAQ

healthcare

The Road to Recovery
from Decades of Neglect

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A Message from Dr. Ala'adin Alwan

Iraqi Minister of Health <June 2004–Present>

Iraq and the Ministry of Health are emerging from more than a decade of intellectual isolation and decades of infrastructure neglect and under-investment. Iraqi health professionals are eager to exchange ideas and learn new and progressive interventions and technologies. The Ministry of Health is working to promote this exchange and explore the international resources and institutions that will help Iraq rebuild a healthcare system that is once again a leader in the Middle East.

More than 30 years ago, Iraq was a regional leader in healthcare. Under the former regime, the country had fallen to last place among its neighbors in per capita health spending. Its doctors, while intelligent and educated, did not have access to state-of-the-art medical training, the Internet, satellite TV, or current medical and professional journals. The former regime also dispensed care along party and ethnic lines. As a result, healthcare for certain segments of the population and the poor was summarily neglected.

Today's Iraqi Ministry of Health is building a comprehensive healthcare system that is financially sound and assures quality care that is accessible, affordable and available regardless of ethnicity, geographic origin, gender, socio-economic status or religious affiliation.

Ministry of Health personnel are actively working to restructure the Iraqi healthcare system. Those involved are battling decades of neglect and under-investment, but there is a talented staff with ambitious, but achievable, goals with a focus on:

- Strengthening the management of the health sector
- Rehabilitation of Primary Healthcare Centers and hospitals
- Maternal and Child health programs
- Community health and mental health programs
- Public health programs, including clean water, nutrition, and disease surveillance
- Professional training in public health, clinical and management settings

Our short term strategies include meeting urgent needs and improving services, strengthening management, and developing and implementing a four-year plan for restructuring the health sector, as well as training and capacity building.

The Ministry of Health is also working to emphasize the importance of decentralizing healthcare by working with Governorates and Primary Healthcare Centers to integrate reporting and data collection into a modern health information system that prioritizes disease prevention and supervision.

An aspect of prevention and primary care will focus on maternal and child health with the goal of reducing the infant mortality rate by one half by 2006.

Finally, Iraq offers sincerest thanks to the community of international participants who have supported us in the last year as we have created this vision for our future healthcare system. Their work, their support, and their shared vision will be vital to our future. We have much to learn and need to maintain these friendships to ensure that our vision becomes a reality.

A Message from Dr. Khudair Abbas

Iraqi Minister of Health <September 2003–May 2004>

Today's Iraqi Ministry of Health is made up of Iraqis who have developed the structure for a comprehensive healthcare system that is financially sound and assures quality care that is accessible, affordable and available regardless of ethnicity, geographic origin, gender or religious affiliation; and a healthcare system that is self sustaining for the future.

The wheel of progress that started last April has brought good things to the Iraqi people. One of them is the team of advisors who, under the leadership of Mr. Jim Haveman, have worked tirelessly over the last year to help get the Ministry of Health back on its feet.

Their efforts, supplemented by the work of coalition forces, NGO's, and national aid organizations including USAID, the Italian Red Cross and DFID to name a few, helped re-open all 240 hospitals and 1,200 clinics after the war, ensure the containment of diseases, and avoid public health emergencies.

Working with their Iraqi colleagues, individuals from this team began many of the improvements we bear witness to today.

Under Saddam Hussein the focus in Iraq was on militarization and the oppression of the Iraqi people. Saddam spent millions on palaces and weapons while at the same time spending less than one dollar per person per year on healthcare services in Iraq. Today, we are spending our millions on the people of Iraq.

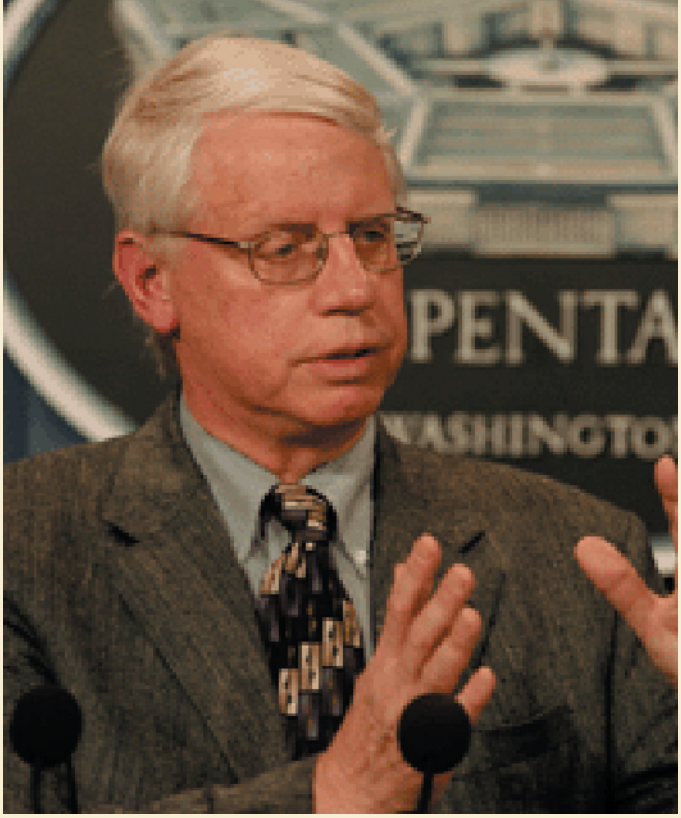
Iraq is a land that was systematically torn down by Saddam's regime–but we have an opportunity: an opportunity to not only improve healthcare for the Iraqi people, but to fundamentally change the way healthcare is delivered in Iraq. Our new system will:

- Shift the focus of medicine from secondary care to primary care
- See us build more centers of care closer to the people and focus on public health, prevention and early intervention at the community level
- Create a system that is open to all people, regardless of party affiliation

The Ministry of Health has taken hold of this opportunity. The Ministry of Health is currently functioning under a new management system. This realignment of duties and administrative functions will help us implement our healthcare vision for Iraq.

Finally, I would like to thank all the physicians and Ministry of Health staff who have worked so diligently to ensure that Iraq will have a world-class healthcare system. I would also like to thank Ambassador Bremer, and the CPA team for their leadership, guidance, and most of all for their friendship over the past year. These relationships, forged over the last year will guide the actions of the Ministry as its people carry forward the vision to a bright future for the citizens of Iraq.

A Message from Mr. James Haveman
Senior Advisor to the Iraq Ministry of Health



It was a pleasure to serve as the Coalition Provisional Authority's Senior Advisor to the Iraqi Ministry of Health and to serve as a team member with Ambassador Jerry Bremer from June 8, 2003 until April 30, 2004.

During this 11-month period I had the privilege of working with over 80 civilian and military personnel who were part of the senior advisors team. I thank each one of them for their commitment and their desire to be part of Iraq's reconstruction.

I and the other staff appreciated very much the support we received from Dr. William Winkenwerder, the Assistant Secretary of Defense, Health Affairs and many of his key staff.

Bob Goodwin, our team's very talented Chief of Staff and I understood the challenges and opportunities we faced when we arrived in Iraq. We committed early on to engage the Iraqis in our task, to interface with them, and then to about face and leave when the hand-over to sovereignty took place. That commitment, combined with the relationships we forged while working with the Iraqi Healthcare Professionals led to the successful transition of the Ministry of Health from the Coalition Provisional Authority. The Ministry of Health was the first of the 25 Iraqi Ministries to transition. I would like to thank and congratulate Dr. Khudair Abbas, the Minister of Health from August 2003 until May 2004, for his commitment and support during this exciting time of reconstruction.

I also want to thank both Dr. Mohammad and Dr. Jamal for their leadership at the Ministries of Health in Kurdistan. Their friendship, tenacity, and desire for a unified Iraq was always an inspiration.

Iraq is a great country. It is rich in history, tradition and culture. Rooted deep among the people of Iraq is the desire for peace and prosperity. One only has to spend a short time in Iraq to see and feel the evil of the former regime of Saddam Hussein. I believe that the true weapon of mass destruction was Saddam himself.

Iraq's greatest resource is its people. Their hope for the future is tied to their desire to break the stranglehold of isolation that Saddam Hussein forced upon them. The liberation by the Coalition Forces ended decades of abuse of the citizens of Iraq and ended the misuse of the resources and economy of Iraq.

Iraq is now free. It is on its way to once again be part of the world stage. Iraq, pre Saddam Hussein, was the gem of healthcare in the Middle East. Given the commitment of the Healthcare Professionals in Iraq, it will in time reclaim that honor.

We were part of this journey. It was hard work. We worked 16 hours a day, seven days a week. We experienced the roller coaster ride of success and difficult times. We experienced loss and pain and took pleasure as the Ministry of Health surfaced as a viable institution and as a health leader. We participated with the 120,000 employees of the Ministry of Health as they reestablished goals and seized the opportunities that the future and the new billion-dollar budget can offer. I would like to especially thank Maysaa and Moyad from the Ministry of Health for their loyalty and trust. I will always cherish what they did for our efforts.

I will never forget the untimely death of Francois deBeer, a member of my personal security team. I never thought that the last thing I would do is speak at a memorial service for Francois who was assassinated. Francois was part of my team for eight months and served with distinction and absolute professionalism.

This report of our efforts provides a guide to the past and an outline for the future. We did not come to occupy the Ministry of Health but to offer our collective skills and wisdom so that the Iraqis today under the leadership of Dr. Alwan can continue to move forward with confidence and excitement about the future.

A Message from William Winkenwerder Jr., MD, MBA

Assistant Secretary of Defense, Health Affairs

I am honored to have participated in the revitalization of Iraq's healthcare system. With the help of the international community and, most importantly the brave Iraqi people, the Iraq healthcare system is recovering and on a path to success. Through hard work, dedication, and collaboration, we avoided a health disaster, established the groundwork for an effective and lasting health system, and created a plan to address the deeper problems affecting the system. I began this effort as I now remain: proud to be a part of the most important stage in the Iraqi rebuilding process-the first steps.

For Iraq, this is a historical occasion as it is part of the rebirth of a great nation. The noose has been taken off the Iraqi people, and the arduous and long overdue healing process has begun. The situation is analogous to the removal of a tumor: although initially quite difficult, once gone, the body can begin the healing process. Each member of our Senior Advisor team will long remember the progress they made and the relationships they forged during this past year. History will remember these same people as a dedicated group of health professionals who helped a country begin its healing and recovery process.

Among all government provided services, healthcare directly touches the greatest number of people. Unfortunately, the former regime knew this too well. For over two decades, the previous Iraqi regime used healthcare as a weapon against its own people. Those times are over and now the Iraqi healthcare system is fulfilling its intended purpose, to comfort and heal all citizens with dignity and respect.

Iraq's potential is its people. Their initial steps this past year to their own better future were powerful and inspiring. Their courage and dedication were evident everyday in everything they did to restore the Ministry of Health and bring its services to their nation. During the past year momentous steps were taken to achieve the goal of a healthy Iraq; however, there is still a long way to go before the final goal is reached. The roadmap for a healthy Iraq has been crafted and the first steps along that path have been taken. We are proud and deeply honored to have assisted the Iraqi people in this monumental undertaking.

In Memoriam:
Tribute to Fallen Teammates

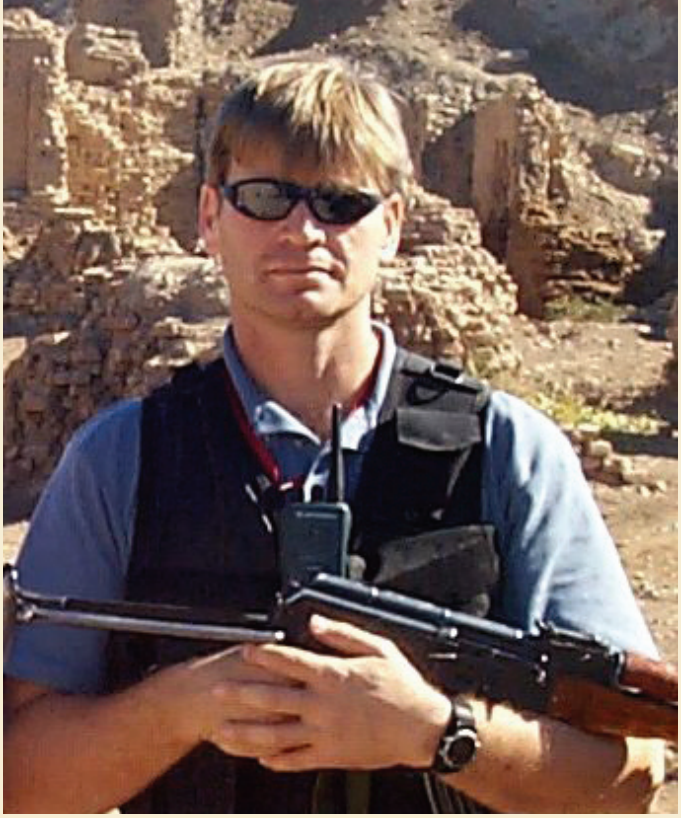
The accomplishments described in this paper were not achieved without tremendous individual sacrifice. Each team member knew the dangers of serving in Iraq and yet, they served with selfless dedication and honor. This team, which brought people from around the world together to serve a population of 26 million people, understood the meaning of duty and lived it every day. During their time in country, a number of team members suffered combat-related injuries and three gifted members of the Ministry of Health-Coalition Provisional Authority team along with two who worked alongside our team made the ultimate sacrifice. Gone now but not forgotten, these wonderful individuals left their mark on the team and will be remembered fondly by all who met and served with them.

Saba

Saba, 24 years old, native of Iraq was assassinated in Baghdad on December 18th, 2003. This vibrant young lady is survived by numerous family and friends. Saba was a very hard-working and dedicated young woman, who was full of hope, dreams and aspirations of turning Iraq into a more desirable and bearable place to live. Luckily, many were blessed to have known her, in and out of the workplace. She worked for the Iraq Ministry of Health, as a wonderful office assistant to Anna Prouse and as a translator to Lieutenant Colonel Scott Svabek. It is extremely heart wrenching that she will never be given the chance to see the difference she and many others have made in Iraq. Many condolences continue to go to this honorable woman's family and to those who knew her. Saba will truly be missed.

Dr. Mike McGovern

Dr. Mike McGovern, native of Waterford, Ireland, quietly passed away of natural causes in Baghdad, Iraq, the night before he was scheduled to return to his home country. A professional public health officer, Dr. McGovern specialized in hematology and oncology, serving with distinction in the United Kingdom as the Chief of Staff for the Chief Medical Officer of the British National Health Service and later as the director of Great Britain's National Cardiovascular Disease Prevention Program. A brilliant public health physician, in June 2003, Dr. McGovern volunteered as a Coalition Provisional Authority Public Health Team chief responsible for reestablishing Iraqi water purification and nutrition programs, development of a pediatric oncology training program and reconstitution of Iraq's national blood banking service and hospital infection control program. The longest serving physician member of the CPA Health Team, Dr. McGovern will be remembered as a quiet professional, tireless, kind, and compassionate; a people's physician.



Francois Jacques de Beer

Francois Jacques de Beer, 34 years old, native of Pretoria, South Africa, husband to Christa de Beer and father to Juan and Chanel de Beer, was murdered on April 22, 2004 in Baghdad, Iraq. Francois de Beer died performing duties for the Coalition Provisional Authority Ministry of Health Team, as a member of Jim Haveman's personal security team. Francois was a well trained South African Police Special Task Force officer, specializing in advanced weapon handling, contact self defense, rural/urban warfare and hostage rescue. Retired from the South African Police Force, Francois joined the CPA Health Ministry Team in October 2003 to provide personal security for the Senior U.S. Advisor for Health. Francois was known for his professionalism, integrity, honesty, and selfless service to his superiors and team members alike.

Corporal Mark Anthony Bibby

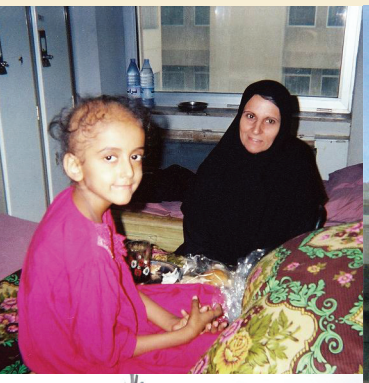
Omar Al-Najjar

Corporal Mark Anthony Bibby, a 25 year old native of North Carolina, and Omar Al-Najjar, a 26 year old native of Iraq, died together when a roadside bomb was remotely detonated as their convoy passed in Baghdad.

In his military role, Corporal Bibby was a chemical/biological specialist and served in the active Army for four years before joining the Army Reserve. He was part of the 422nd Civil Affairs Battalion. In his civilian life, Corporal Bibby was a sophomore at North Carolina A&T University in Greensboro majoring in transportation at the School of Business and Economics. Corporal Bibby was engaged to be married upon his return from this deployment. In addition to his fiancé, he is survived by his parents Eustace, Sr. and Jean Bibby, his brother Eustace, Jr., and his sister Christina.

Omar Al-Najjar, known to many simply as "Omar" was an Iraqi translator hired to assist the soldiers of the 422nd Civil Affairs Battalion. He had earned both a Bachelor's and a Master's degree in Biology from the College of Science at Baghdad University. Omar had planned to pursue a PhD and become a University professor. "To know Omar, was to love Omar", said another 422nd soldier.

A memorial service was held for Corporal Bibby and Omar on July 26th, 2004 in Baghdad. Readings from both the Bible and the Quran were offered, as were personal testimonies by both American and Iraqi friends. The memories we have of these two men will always remain in the hearts of their family and friends.




ثورة الحسين

Introduction

Healthcare organizations measure success in terms of outcomes. Patients measure success in terms of access to care and quality of service, as well as outcomes. While all three are important in a normal functioning and stable society, in a post-conflict environment, these three elements take on a critical role in returning society to acceptable levels of normalcy.

An Iraqi boy is refreshed by the cool running water in Baghdad on June 15

The Ministry of Health was the first ministry to be recognized as being ready for the Iraqi people to assume the strategic direction and operational control. On March 28th, 2004 a ceremony marked the official turn over of the Ministry of Health to the people of Iraq–a full three months ahead of the June 28 CPA turnover.

To return healthcare services in Iraq to pre-war conditions and to rebuild the system to raise access and quality of service to internationally acceptable standards, the U.S. Government and the international community recognized early on that decisive steps would need to be taken. In anticipation of serious post-conflict damage and in recognition of systemic healthcare services issues, the U.S. Government initiated its post-conflict planning process a full six months prior to major hostilities. This early planning process took the form of an interagency Humanitarian Planning Team, staffed with representatives from the Office of the Secretary of Defense (OSD), the Department of State, USAID, the Joint Staff, and U.S. Central Command and reporting to the National Security Council. The efforts of the Humanitarian Planning Team resulted in the availability of three key sets of resources as the conflict began. First, the U.S. Government created the largest Disaster Assistance Response Team (DART) led by Dr. Skip Burkle, in history, comprised, for the first time from interagency resources. In addition to the DART, the Humanitarian Planning Team also fed critical information to DoD to ensure appropriate formation and deployment of Civil Affairs teams to address civil response requirements in real-time.

Finally, the Humanitarian Planning Team also established communications with international non-Governmental organizations (NGOs) such as the International Committee of the Red Cross (ICRC) and the World Health Organization (WHO) to apprise them of projected needs.

These three distinct sets of resources–the DART, the DoD Civil Affairs teams, and resources of various International Organizations (IOs) and NGOs–were on the ground and responding to the needs of the Iraqi people as the conflict unfolded. The very presence of these three sets of resources precluded the potential for massive displacement of people and helped avert the humanitarian crises that might otherwise have been expected.

Once the immediate crisis was averted, the Office of Reconstruction and Humanitarian Assistance (ORHA), under the leadership of General James Garner, took over from the DART, and with support from the dedicated Iraqi healthcare professionals and the DoD Civil Affairs teams, established basic healthcare services. The ORHA healthcare lead, Mr. Steven Browning, addressed immediate needs of the healthcare community and paved the way for a more strategic mission that would be addressed by the Coalition Provisional Authority's Health Team in June 2003.

Dr. Mahmood Thamer, an expatriate Iraqi physician and professor, "was greeted warmly with open arms" by former colleagues with whom he had worked over 30 years before. This foretold the strength of the relationships that would be forged across the medical community over the coming year.

Iraqi children enjoy treats provided by CPA Staff

With the mandate of raising the health status of the Iraqi people, the Iraqi CPA-Ministry of Health (MOH) team established a vision for its healthcare system and created a business process model to achieve this vision. The Iraqi Ministry of Health staff created a new mission statement for the Ministry: to build a comprehensive healthcare system that is financially resourced at an appropriate level, that assures accessible quality care, that is affordable and available regardless of ethnicity, geographic origin, gender, socio-economic status or religious affiliation.

With the aid and assistance of many partner organizations, the Iraqi Ministry of Health is on the road to recovery. It has begun the process of restoring, refurbishing, repairing, and replacing that which has fallen into neglect, that which needs attention, but most importantly, those who need healing.

This account is the story of the CPA, teamed with the Iraqi people and the employees of the Ministry of Health, who have persevered through years of hardship and are now charting their own course for the future. The following pages summarize the actions taken by the CPA-Ministry of Health team, their significant accomplishments, and the successful outcomes of the year ending June 2004 for the Iraqi Ministry of Health. This account of activities and initiatives taken over the past year describes both the process model and the progress toward achieving the new healthcare vision. As with most success stories, there are lessons learned that should be shared and applied for the benefit of all organizations and people involved in rebuilding not only Iraq but also other post-conflict environments. The final section of this report highlights these lessons learned.

A man arrives with his 3 beautiful children for care at the Ayatolah Clinic in Baghdad

"The physical infrastructure has deteriorated as a result of over twenty years of under-investment, poor management, and conflict..."

United Nations/World Bank Joint Iraq Needs Assessment

Background

In 2003, Iraq was center stage. Many international organizations (e.g., the Iraqi Red Crescent, the International Committee of the Red Cross (ICRC), the World Health Organization, USAID, the United Nations) were providing humanitarian support and relief in Iraq. When major hostilities ended, these players, in addition to the DART, the DoD Civil Affairs teams, ORHA, and, ultimately, the Ministry of Health-CPA team, were ready to step in and support the Iraqis. Clearly, the need was great, as was the desire for people around the world to contribute and to help. Resources (dollars, human capital, infrastructure rebuilding, support, etc.) were being made available to the Iraqis from a variety of Governmental and non-Governmental sources worldwide. The challenge for the Ministry of Health, and by extension the Ministry of Health-CPA team, was to create a coordinated effort that would leverage the capabilities of the many and varied participants from around the world, and to provide the Iraqis with the business tools and acumen to improve the healthcare system for all Iraqi citizens.

To accomplish this, the CPA from its earliest planning initiatives, understood the need for a healthcare advisory team to support the development of a revitalized Iraqi Ministry of Health. The Washington-based support element for the Iraqi-based team took on the task of identifying and recruiting this team. The Assistant Secretary of Defense for Health Affairs, Dr. William Winkenwerder led this effort, and with support from Secretary Tommy Thompson, and the Department of Health and Human Services (HHS), was able to recruit and deploy an advisory team in less than a month. Dr. Winkenwerder's DoD staff, along with Secretary Thompson's HHS staff, became valuable resources for the on-the-ground advisory team in Iraq. Dr. David Tornberg, Deputy Assistant Secretary of Defense for Health Affairs, along with Captain Jack Smith, MC, USN, Director of Clinical and Program Policy Integration, spearheaded the U.S. based DoD team, coordinating routinely with HHS, USAID and State Department teams and ensuring real-time support to the Iraq-based CPA advisory team.

According to a World Health Organization assessment, in early 2003, the national electrical grid served 51% of health facilities; 49% of health facilities depended on generators for electrical power; 24% of health facilities had no generators.

Iraq's Health Sector Situation Assessment and Strategy Options; Ministry of Health, Iraq, Coalition Provisional Authority, Iraq, UN Development Group, World Bank; Task Manager: World Health Organization, October 2003

An Iraqi woman retrieves drinking water from distribution trucks in Basra on April 22

The CPA designated Mr. James Haveman to lead this effort with support from his deputy, Mr. Robert Goodwin. Mr. Haveman and Mr. Goodwin coordinated the efforts of their many teammates. This testimony tells the story of this team – a group of professionals based in Iraq, supported by a dedicated team of experts worldwide. The Iraq-based team included staff from the Department of Defense and Department of Health and Human Services, and was supported by the U.S. Agency for International Development and other coalition nations as well as many non-Governmental organizations (UNICEF, World Health Organization, the World Bank, the United Nations, the Red Crescent, CARE, etc.).

In June 2003, Iraq, a country of approximately 26 million people, had suffered greatly from war, conflict, economic sanctions, and looting. According to the U.S. Treasury Department, Iraq's gross domestic product was $128 billion in 1980. By 2003, the figure was estimated at just $30 billion and the country's debt burden was $128 billion. Unemployment was nearly 50% for most of the 1990s. Women represented 52% of the population but only 23% of the workforce. In 2001, 72% of the population was under 25 years old. In 2002, under the previous regime, the Ministry of Health's entire budget was $16 million, or just 64 cents per person.

During the 1970s and 1980s health status for the Iraqi people appeared to show a promising trend. However, these same indicators showed a perilous reversal after 1990. From 1990 to 1996, infant, child and maternal mortality rates more than doubled. By 2002, Iraq's infant mortality rate tracked significantly higher than neighboring countries. Maternal mortality ratios peaked at 300 per 100,000 births. Best estimates indicate that during the 1990s, up to 30% of urban area births and 40% of rural area births occurred without a trained healthcare provider present with 20% of these deliveries considered high risk and in need of advanced medical support.

Dr. Winkenwerder meets with Iraqi doctors at the MOH Conference

"Fortunately, the whole CPA-Ministry of Health team was mission-driven. Ego's were set aside and the accomplishment of the mission was always Job #1... There is no finer group of people, more committed to the healthcare of the Iraqi people than this group (CPA-Ministry of Health) and it was an honor and a privilege to be a part of that team."

David Kvamme, Captain, USPHS

The healthcare system was inefficient and access was inequitable. The best of healthcare resources–personnel, equipment, and facilities, were reserved exclusively for the military and for the "ruling" family. The lack of a strategic vision and holistic approach to basic healthcare fragmented the sector into islands of isolated and reactive care. Decision-making concerning population healthcare was centralized, forcing care that would normally be provided at the local level to urban centers. Resource distribution patterns favored some, neglected others. Under-investment in its physical infrastructure and the lack of any maintenance program for more than two decades left the system fragmented and performing significantly below its true capacity.

On top of these facts, the priorities of the previous regime were rarely aligned with the needs and priorities of the general population and in some instances were directly opposed to those needs. For example, maternal child health issues were neglected as the high mortality rates reflect. In 2000, The World Health Organization, along with UNICEF conducted an immunization review and found that only 61% of two-year old children had received all their vaccine doses according to schedule. Healthcare spending during the 1990s fell dramatically—by some accounts as much as 90%.

During this time, many health professionals left the country. For those who remained, training and professional development was non-existent, exposure to the international healthcare community was strictly prohibited–even access to medical findings and advancements, technology, journals, and conferences was denied. The number and quality of nurses in Iraq was, and to some extent remains, a serious problem.

The healthcare system was not immune to the rampant corruption that ruled many dimensions of social order in Iraq. Medicines that could help many were warehoused and left to expire while those that had little application were distributed far and wide. Formal market mark-up on pharmaceuticals and medical supplies occurred regularly. Interviews conducted with CPA staff indicated that Kimadia, the state run pharmaceutical distribution organization, was especially prone to corruption and staff were more likely than not to be engaging in illicit sales at exorbitant prices.

Colonel Gerber Remembers the Intial Situation

When Colonel Fred Gerber arrived in Baghdad to support the Ministry of Health, the scene on the ground bordered on chaotic. The two buildings that had housed the Ministry of Health had been completely looted–not just high value items, but almost any usable substance. Ceiling tiles were missing, electrical sockets had been pulled from the walls along with copper wire, files were destroyed, furniture was removed, and there was virtually no historical documentation available to provide a framework for how the Ministry had functioned. The Ministry staff was shell-shocked. They would linger in the parking lot not knowing what to do, where to go, or where to begin.

The first order of business was to create order, establish an organizational framework, begin the process of rebuilding the infrastructure of the Ministry, and get the staff back to work. The staff occupied one building while the other was being re-built. Staff rosters were built from scratch. Members were selected as floor leaders–persons responsible for the care and maintenance of their floors, and soon areas began to evolve into usable, workable office space. An organizational structure was established based on best practices. Organizational leaders were selected to provide the staff with roles, responsibilities and authority. Soon, the Ministry of Health was up and functioning again, but not without inhibitors.

Many things we take for granted were not available. There were no telephones–land-line or cellular. Communication between floors, across the street, or across the city relied on couriers. Sometimes they were reliable–sometimes they were not. All travel had to be done during daylight hours. If Ministry of Health staff members needed to go into one of the provinces to work, they left at dawn and returned before dark due to the threat of a road ambush. Through all these challenges, however, the Ministry of Health continued to mature as a healthcare management organization.

Buildings are illuminated in Baghdad on April 22

Hospital Corpsman David Jones holds
two hour old Rogenia Katham, Nasiriyah Iraq, on April 3

"While Iraq's physical infrastructure may have been left to decay, the mental energy of Iraq's physicians—while shrouded in isolation—has remained engaged."

Dr. Khudair Abbas at the Iraqi Medical Specialty Forum, February 2004

The Oil for Food Program that should have provided ample supplies of medicines for the Iraqi population was mismanaged and abused by the former regime. As the healthcare system slowly deteriorated over the years and corruption rose, it had a negative influence on clinical practices. Physicians resorted to prescribing drugs rather than focusing on prevention and treatment. In turn, the citizenry began to measure medical performance based on the number of prescriptions versus the quality of treatment.

Arriving on the Scene

Military and healthcare planners, like many from the humanitarian aid community worldwide, anticipated the potential for a health crisis in Iraq during and after hostilities. They had good reason. Throughout the world, in countries where basic services such as potable water, reliable power, and refrigeration are disrupted, health crises occur, even in absence of war. Those conditions did, in fact, exist in Iraq and to some degree continue today. Coupled with war, this situation could have set the stage for crisis during 2003 and 2004. However, as described above, the extensive early planning of the Humanitarian Planning Team generated a multifaceted approach that prevented such a crisis from actually materializing.

When the Coalition forces entered Iraq in early 2003, they were followed immediately by teams from the DART, who addressed immediate humanitarian assistance needs, along with the Army's Civil Affairs Division, who were tasked to provide real-time assistance in re-establishing infrastructure services to the people of Iraq.

"Studies have identified health issues for Iraqi women including: high incidence of anemia, low birthweight, and high mortality in pregnancy."

Iraq MOH Weekly Update, Vol. 1

Ministry of Health employee at an upgraded laboratory facility

The Civil Affairs teams, led by Colonel Bob Frame, Colonel Butch Anderson and Lieutenant Colonel Charles Fisher worked in collaboration with the USAID DART, which was led by Frederick "Skip" M. Burkle, Jr., MD, MPH, FAAP, FACEP. Dr. Burkle's team, along with the Civil Affairs teams and various NGOs were prepared with pre-positioned stores of food, medical supplies, potable water, and water purification equipment. These teams immediately began providing healthcare assistance to the Iraqi people and began assessments of future needs for the Iraqi healthcare system.

The DART quickly achieved its mission of disaster assistance and was soon replaced by ORHA, and then by the CPA, which would apply a more strategic, organizational focus on sector development. Leading the transition from ORHA to the CPA were Mr. Steven Browning and Dr. Said Hakki. Mr. Browning and Dr. Hakki together laid the groundwork for the CPA's yearlong efforts. They served in this capacity until the arrival in June 2003 of Mr. James Haveman.

Mr. Haveman and his multi-national team of healthcare professionals were assembled to serve as CPA liaisons to the Iraqi Ministry of Health in June 2003. This team consisted of civilian and military doctors, nurses, administrators, and aides from around the world. Knowing right from the start that their assignment would be temporary–with a goal of turning the system over to the Iraqi Ministry of Health officials to carry the mission forward–the CPA's international team created a sustainable and systemic approach to rebuilding Iraq's healthcare system. The team established collaborative relationships with their Ministry of Health counterparts. They positioned themselves to support the Ministry of Health staff, becoming mentors, teachers, and facilitators. This cooperative, empowerment model was right for its time and is believed to have been an essential element in allowing the Ministry of Health to become the first to be transitioned to Iraqi control.

Dr. Winkenwerder meets with
Iraqi healthcare professionals at the
MOH-CPA Priority Setting workshop in August 2003

"More than 250 persons representing the Medical Directors General Senior Staff of each of Iraq's 18 Governorates and Baghdad Medical City participated in the National Directors General (DG) Meeting at the Ministry of Health."

Iraq Ministry of Health Weekly Update, Vol. 7

When the multi-national CPA team arrived in June 2003, they found that hospitals and clinics were still open, working with patients. In spite of initial and ongoing shortages of electricity, water, medications, and critical equipment, the impact of the DART, Civil Affairs, and ORHA teams, along with the sheer dedication of the Iraqi healthcare professionals, resulted in continuation of care. In addition to the leadership of Colonel Anderson, Lieutenant Colonel Fisher, and Mr. Browning, numerous Civil Affairs staff, including Lieutenant Colonel Dee Anderson, Colonel John Black, and Lieutenant Colonel Raul Diaz, provided invaluable support. Though the Ministry of Health building resembled a ransacked, bombed out shell with barely a window or a wall still intact, workers were lining up outside the security gates to get in to do their jobs.

The team also determined that a set of ancillary conditions existed that prevented the optimization of resources. These conditions included fear of reprisal, inadequate and insufficient middle management skills, and an inability to mobilize, marshal, and translate financial resources into physical resources such as facilities and pharmaceuticals.

Fear of reprisal was pervasive throughout Iraq, not just in the healthcare field. Interviews indicated that local staff would prefer to make "no decision" rather than risk making a "wrong decision." CPA staff quickly recognized that empowering local Iraqi leadership would be key in reviving the healthcare system from its inert state.

Decision making authority needed to be pushed away from Baghdad and placed at appropriate local levels. This mental shift would take time and measured courage by the Iraqi Ministry of Health staff. Importantly, this shift would not be achieved if the international team made the decisions for the Iraqis; they needed to empower them to make their own decisions. Again, in keeping with what would become a key element of the CPA's process model, the CPA took the position that decisions were to be made by Iraqi officials at all levels while the CPA role would be to advise and support.

"I have pride in the achievements of people such as RADM Craig Vanderwagen, whom Secretary Thompson deployed from the Indian Health Service to serve, currently, in Iraq."

Richard H. Carmona, M.D., M.P.H., F.A.C.S., Surgeon General, U.S. Public Health Service, Department of Health and Human Services

Also prevalent throughout the Ministry of Health was a general lack of efficient business management skills at the lower and middle echelons. As with other countries such as all twelve former Republics of the Soviet Union, Poland, Czech Republic, Slovakia, Hungary, the former Yugoslavia, Albania, Rwanda, and Senegal, interviews indicated that Iraqi professionals were rewarded more for acquiring technical skills than management skills. Once again, business decisions on such critical issues as financial management and budgeting, infrastructure investment, and training were entrusted only to upper management in Baghdad who had proven loyal to Saddam's regime.

In addition to empowering Iraqis to make decisions with the commensurate responsibility, the CPA staff recognized that management training would be required over the longer term.

Over the past year the Iraqi health sector realized a financial infusion of nearly two billion dollars–one billion from Iraqi sources[10], $793 million of U.S. Government funds to be applied directly to the Ministry of Health's requirements, and the additional millions pledged from other international donors. Had healthcare been functioning as a multi-billion dollar industry as it should have been, this infusion might not seem so dramatic. However, the prior regime spent only $16 million dollars the previous year for the entire healthcare budget.[11] The new infusion of funding was nearly 6,000% more than the previous year and is expected to remain high in the future due to increasing Iraqi revenues and the commitment of the Iraqi government to healthcare.

Due to the lack of middle management skills and risk aversion, the Ministry of Health was unable to mobilize these new resources and optimize their potential impact. Initial fact-finding and analysis also uncovered a number of key characteristics of the existing Iraqi healthcare system that would hamper movement to a modern and effective system. Notably, these characteristics included:

- Focus on hospital rather than primary or preventive care. While interviews indicate that private medical practices were available, most care was provided at hospitals
- Lack of awareness of, or performance to, international healthcare standards
- Severe lack of qualified and trained nurses

Dr. Winkenwerder addresses an audience of Iraqi healthcare professionals at the Strategic Planning Conference, August 2003

Designing the Models for Success

Faced with these findings, the CPA senior advisory team upon their arrival, set out to create two models that would:

- Empower the Iraqi people and providers in the formal health system
- Establish the mechanisms to help streamline procurement processes by translating funding into actions and capitalizing on international donor support
- Redefine and monitor healthcare goals, focusing first on infrastructure and primary care
- Assist in establishing self-regulating institutions throughout the country

The business process model they created provided the framework for success and guided them on the road to recovery. From day one, the following nine attributes of the process model guided the team:

- Empower and facilitate
- Plan the transition right from the start
- Support open communications
- Treat everyone with respect
- Utilize the resources of the diverse, coalition team
- Engage on-site, early, and often with all Iraqis
- Ensure appropriate resourcing–create a demand-based budget relationship
- Provide rear support for the team–when support is needed remotely, ensure that it can be provided
- Act as mentors, creating trust, respect, and an environment of learning and sharing

An Iraqi baby enroute to the hospital at Sulaymaniyah

This approach was an all-inclusive model that embraced intellectual interchange and collaboration at many different levels. For example, the model demanded intensive cooperation from the international community alongside the Iraqi citizens; military staff alongside civilians; women alongside men; and local staff integrated with remote support teams.

The Iraq-based team, led by Mr. Haveman and Mr. Goodwin, made maximum use of the expansive resources available to them remotely. For example, they maintained, throughout the yearlong effort, three routine teleconferences. They held weekly teleconferences with the DoD/Health Affairs leadership, bi-weekly interagency teleconferences, and a bi-weekly teleconference with the World Health Organization.

The weekly DoD/Health Affairs teleconferences were held with Dr. Winkenwerder and a team of his senior leadership, including the Senior Medical Officer of the Joint Staff, General Darrell Porr, MD; the Deputy Assistant Secretary of Defense for Clinical and Program Policy, Dr. David Tornberg, and Dr. Winkenwerder's Director for Clinical & Program Policy Integration Captain Jack W. Smith, MC, USN.

The bi-weekly interagency teleconferences included representatives from the Armed Forces Medical Intelligence Center, USAID, DoD/Health Affairs, Health and Human Services and Department of State. Captain Smith led the calls, ensuring a comprehensive response to the needs of the CPA team. Both of these teleconferences served as mechanisms for the Iraq-based CPA team to utilize the advice and recommendations of the U.S.-based senior leadership and also served as a quick-turn-around mechanism for meeting the emerging needs of the team. For example, when staffing requirements changed, or unique expertise was required, these teleconferences were an invaluable tool to communicate these requirements to the highest level, thereby enabling immediate identification of staff to support the project. The team also participated in bi-weekly teleconferences with the World Health Organization, which provided a valuable mechanism for exchanging and validating information and perceptions on various healthcare sector topics.

The healthcare delivery model developed over time, through the strategic planning process and as a by-product of the assessments done on the existing system. Designed for and by the Iraqi people to help the Ministry of Health achieve its vision, this model for healthcare was created to provide quality service, better access to care, and deliver positive health outcomes to the Iraqi population. This integrated, decentralized health services delivery model moves decision making to local physicians and care providers and emphasizes seven core elements of the health system reform vision:

- Population empowerment with patient choice
- Community involvement
- Integrated health services delivery system with strengthened primary healthcare
- Financial risk protection (equity)
- Health provider management autonomy
- Quality improvement
- Human resources supply and development

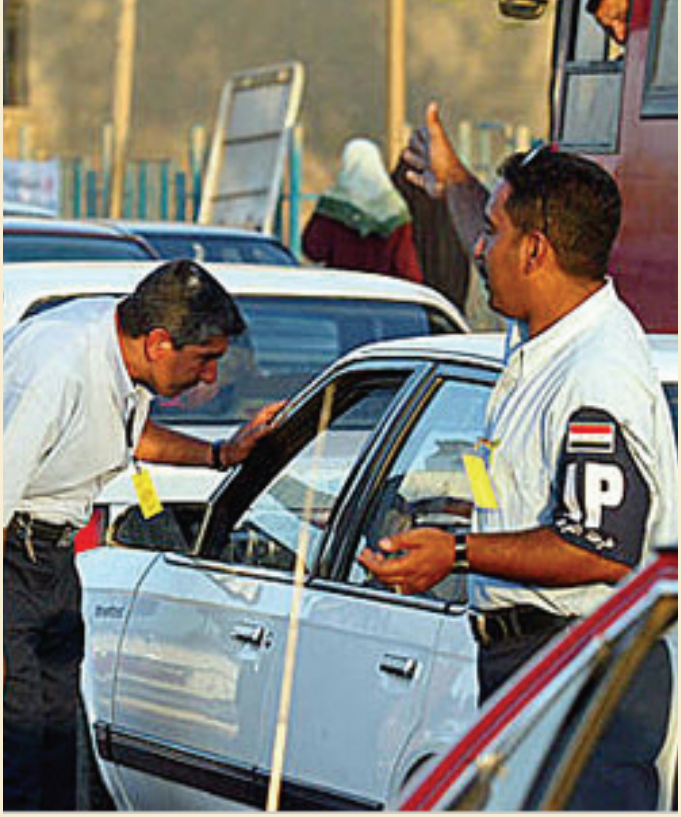
The full autonomy of the Ministry of Health was recognized at an official ceremony marking the event on March 28, 2004. At this time, Mr. Haveman formally relinquished autonomy and leadership to Dr. Khudair Abbas. Soon thereafter, Mr. Haveman and Mr. Goodwin departed Iraq, leaving the CPA's Health team in the hands of Mr. John Walker, Lieutenant Colonel Ken Backes and Commander David Tarantino. In early June, an Iraqi interim government was established and the initial Minister of Health, Dr. Abbas turned over leadership to the new Minister, Dr. Ala'adin Alwan. In June 2004, with the turnover of sovereignty to the Interim Iraqi Government, the CPA was officially replaced by the U.S. Embassy. Mr. Walker and Commander Tarantino continued to support the MOH in the role of Senior Consultants. Finally, in July 2004, the State Department's Health Attache, Mr. Jeffry Brinkley arrived and assumed responsibility for U.S. support to Iraq's Ministry of Health.

Organization of this Commentary

This account has been organized into three major sections. The next section, entitled Addressing Immediate Priorities, discusses security and infrastructure stabilization efforts and addresses immediate priorities such as public health infrastructure and making provision for pharmaceuticals and medical supplies. In Section Two, Mapping the Future and Creating the Sustaining Foundation, the multiple and integrated strategic planning initiatives for Iraq's healthcare are detailed as well as the effort made to create an Organizational Infrastructure for the Iraqi Ministry of Health. The last major section, The Years Ahead: Actions and Priorities, addresses development of a long-term training and development plan for Iraq's healthcare provider community, and implementation of a primary care model for the Iraqi healthcare system. This section describes the measures taken and the outcomes realized. Finally, we will discuss efforts to ensure continued international support for the Ministry of Health.

Addressing Immediate Priorities

In April 2003, after the collapse of Saddam's regime, widespread looting and street violence reigned. Not spared, hospitals, clinics, and other healthcare facilities throughout the country fell victim to looters[12]. Anything perceived as having value was looted. Equipment was carried off or thrown into the streets. Healthcare facilities were stripped bare: windows were broken; doors, hardware, and even walls were taken or destroyed. Facilities that did not fall victim to the looting were those that had already suffered from years of neglect and insufficient funding. The Ministry of Health headquarters building was a shell, having been burned, and looted. Women, who represent a large portion of the staff at the Ministry of Health were especially vulnerable to the erupting street violence and faced travails just getting to work.



Iraqi police at a checkpoint in Baghdad on June 22, 2003

Bombing at the Al-Rashid Hotel

U.S. Army Colonel Elias Nimmer was deployed to Iraq in July 2003 with the task of assisting the Iraqis in managing the Ministry of Health finances. In late October the Al Rashid Hotel, where Colonel Nimmer was staying, was attacked. A rocket fired from a nearby park exploded in Colonel Nimmer's hotel room. A piece of shrapnel lodged in his back, temporarily paralyzing him from his chest down. After being evacuated out of Iraq, he underwent surgery at a U.S. Army Hospital in Europe. He eventually regained full use of his body and returned to active service.

During major hostilities, military operations deliberately focused on destroying Iraq's ability to communicate. In the post-conflict environment, this focus resulted in a highly degraded national communications system with virtually no computer networks, and little working computer equipment. The transportation infrastructure was also heavily degraded, due in part to targeting by military strategists as well as the increasing levels of street violence.

The overhaul of police services resulted initially in little if any security for civilians and made traveling from place to place perilous. As a result, the distribution of medical supplies and equipment presented great logistical challenges.

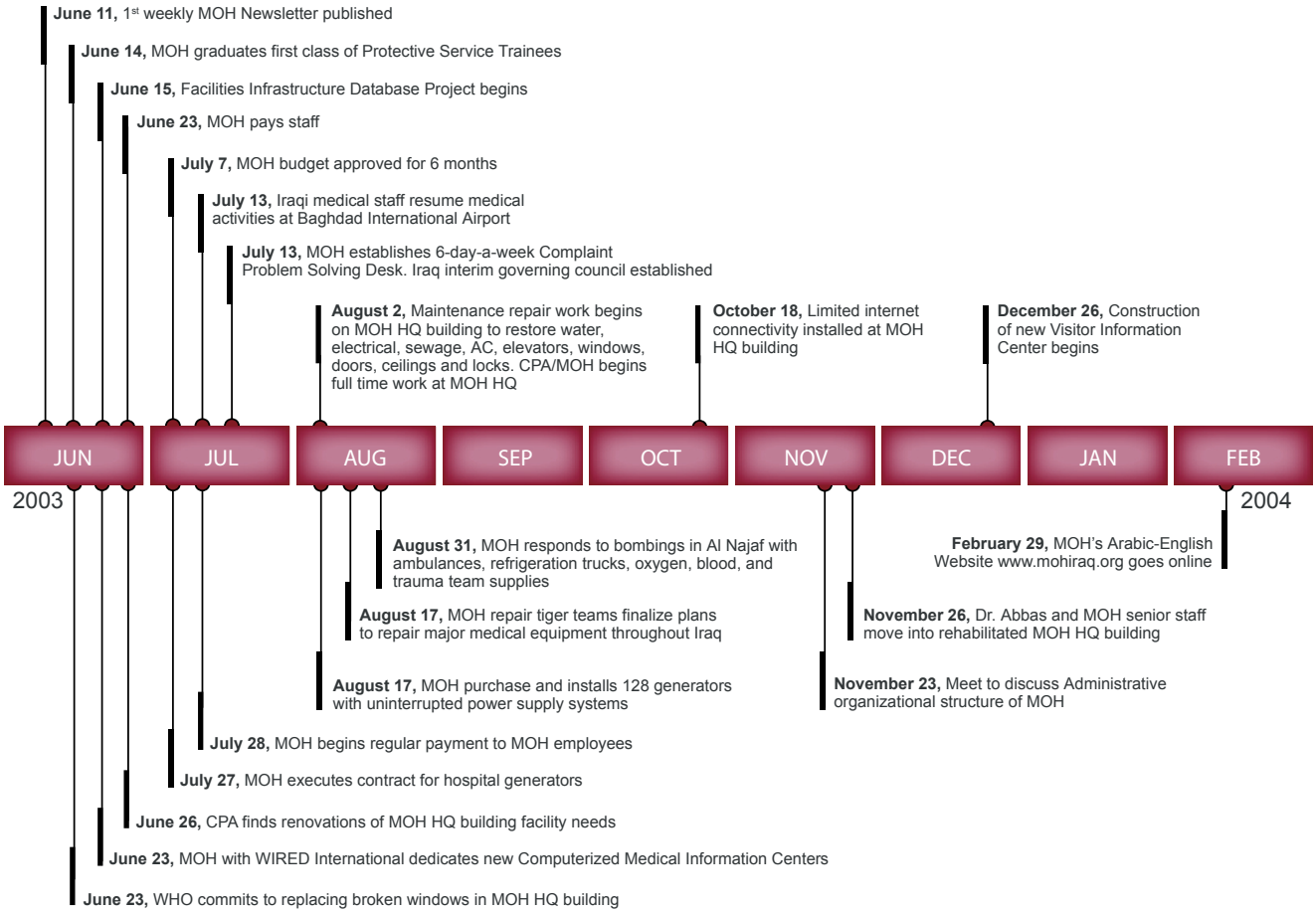
When they were last paid prior to the arrival of the CPA team, doctors received $20 per month (U.S. equivalent), but all Ministry of Health employees, including the doctors, had not been paid for nearly three months.

Security and Stability

Against this backdrop, the CPA team arrived in June 2003. Their task was to pick up where the DART, Civil Affairs, and ORHA teams had left off, creating a strategic vision and a roadmap for the Ministry of Health to revitalize Iraq's healthcare system. In many cases, this revitalization included not only a strategic vision and the associated fundamental management strategies, but also the stabilization of basic infrastructure and security.

Security and Stability Approach

While a far cry from optimal, the Iraqi healthcare system was operational, even at the height of conflict. Still, its needs were many and immediate. The job of the Ministry of Health was to enhance the system so that its performance levels continuously improved to a level sufficient to meet their mission. With sufficient funding, the Ministry of Health was able to prioritize its most pressing needs and implement action steps, which resulted in rapidly restoring basic services nationwide.



Security and Stability Accomplishments

As shown in the timeline, many activities occurred in the first three months of the stabilization effort. However, infrastructure stability efforts including both organizational infrastructure and physical infrastructure, would continue for another eight months.

Establishing infrastructure stability, including developing short and long-term strategies and fundamental management systems such as communications, personnel policies, and budgetary controls, was a key factor in turning over full authority from the CPA team to the Iraqis in the Ministry of Health.

Upon arrival, one of the first priorities for the team was to provide hope and guidance to the Iraqi people, and at the same time, stabilize basic healthcare services. To accomplish this, establishing physical security was paramount. Within two weeks of the team's June arrival, the Ministry of Health graduated its first class of Facility Protective Services Trainees. The Facility Protective Services' mission was in part, to reestablish security for Ministry of Health facilities and personnel. By May 2004, the Ministry had recruited, trained, badged, and provided weapons for 1,300 Facility Protective Services guards, including women that were integrated into the service.[13]

As another early priority, the team began publication of a weekly newsletter. This simple act established open and available communications (a key tenet in the process model) and signaled a dramatic change from the former regime. This newsletter's routine publication created not only openness, but also an element of predictability. Publication of the newsletters continued throughout the CPA's term in Iraq with significant contributions from Ms. Anne Trenolone and Ms. Anna Prouse.

By July 2003, a complaint/problem-solving desk was established and operated six days a week.[14]

By October 2003, limited Internet connectivity had been established within the Ministry of Health's headquarters building.

By February 2004, the Ministry of Health's Arabic-English website went online. This too, was a critical step that reinforced the process model.

By engaging the population early and allowing them to give voice to their issues, the CPA's Ministry of Health team demonstrated that they were serious about serving and supporting their constituents.

Lieutenant Colonel Diane Simpson works with an Iraqi colleague at the MOH in Baghdad

July 2003

A $210 million six-month budget for the Ministry of Health was approved. This budget includes $125 million for pharmaceutical supplies and equipment and an additional $31 million to add to the $9 million previously designated for generators.

Another early achievement was the initiation of a facilities infrastructure database project. This effort helped attack systemic problems facing the Ministry. Based on survey results, over 65% of the Ministry's equipment was non-functional, no new facilities had been built in the last 25 years, and there appeared to be no existing program to maintain, repair, or upgrade equipment for facilities.

It was evident that in order to move forward, the Ministry needed to take stock. All dimensions of critical infrastructure were examined to identify, catalog, and prioritize those facilities that needed to be repaired, rebuilt, restored, or replaced. This assessment included everything from basic services (water, sewer, electricity) to physical infrastructure (bricks and mortar, walls, windows), to medical supplies and equipment, to pharmaceuticals. To act upon the information gathered, tiger teams were formed to conduct more thorough assessments and to create and execute plans to repair major medical equipment deployed throughout Iraq. USAID team members were instrumental in making this project a success.

Within the first month, the Ministry of Health began paying its staff, and by the end of July 2003 pay distribution had become routine. As a means of establishing stability, a new salary schedule was implemented. Physicians previously paid $20 per month now have salaries averaging $363 per month.[15]

As part of the approach of engaging early and on-site with the population, the Senior Advisor's team moved out of the "Green Zone," the heavily fortified operational headquarters for the CPA and into the Ministry of Health headquarters. The movement demonstrated to the population the willingness of the healthcare system to push forward.

By August 2003, the CPA Ministry of Health team began full-time work at the Ministry of Health Headquarters building in Baghdad. To meet this milestone, funding from the World Health Organization to replace broken windows and the USAID Office of Transition initiatives to replace equipment and furnishings lost during post-war looting had to be secured. A $1.7 million maintenance contract to repair and maintain the building was put in place.

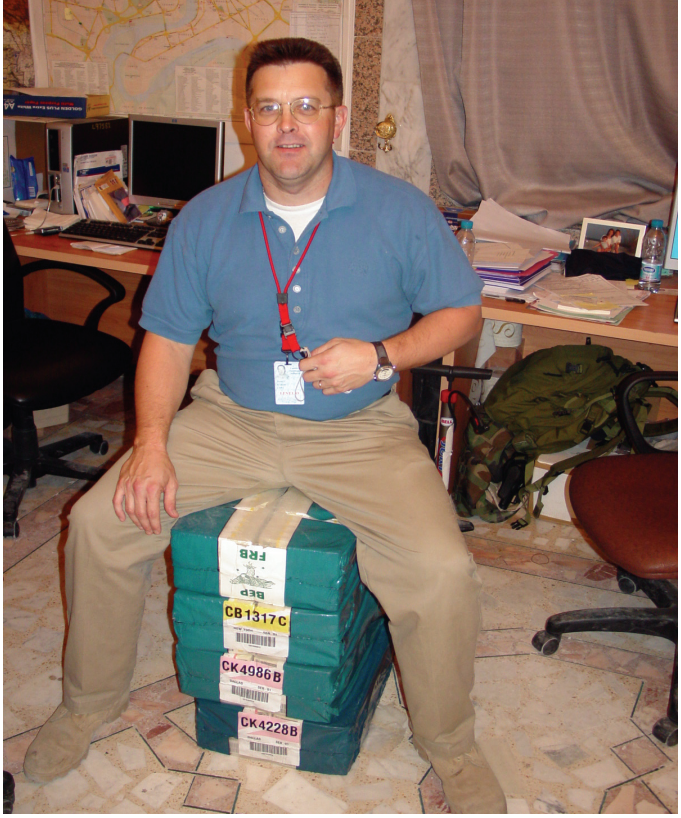
By November, the Ministry of Health senior staff moved into the rehabilitated Headquarters building.

Money

Money–everything runs on it. In our world, money can be an electronic transfer, a debit card, a credit card, check, or money order, but in Iraq, these modern, electronic monetary tools simply didn't exist. In Iraq, "money" meant "cash". Quick payment of vendors, security personnel, or any other person or organization was essential to moving forward with the needs of the Ministry of Health, as well as to the morale of the Iraqi people. And the only mechanism available to pay these people was U.S. dollars–in cash.

"We would wait until we had a number of vendors or a payroll payment due and make a money run to the bank. We would don the local dress of the civilian population, go to the bank, withdraw the required cash (many times, millions of dollars), and fill up the back end of our Toyota Land Cruiser. Then we would make haste to wherever it was we needed to go to pay our debts, serving as our own security–medics with guns. One of us would drive, one of us would ride "shotgun" in front, and one would watch our back for anyone trailing us–many times actually sitting on the pallets of dollars. We would take diversionary routes up alleys, etc., when we suspected we were being followed. It's remarkable that we were able to operate under the cash system for so long, with so little security, without an incident."

Recollections of Major Mike Smith,
Medical Service Corps, U.S. Army



CPA health team member with reams of cash to be used for Ministry of Health payroll

Physician Salaries in Iraq

Pre-liberation: Equivalent to $20-30/month

Post-liberation: Equivalent to $363/month

Mr. James Haveman,
Senior Advisor to the CPA-MOH Team

An Iraqi mother discussing treatment for her malnourished baby

"A healthy population is vital to development and economic growth. Health conditions in Iraq deteriorated substantially under Saddam Hussein. By 2003, almost a third of the children in the south and central part of the country were malnourished. Low breast-feeding rates, high rates of anemia among women, low birth weight, diarrhea, and acute respiratory infections caused one in eight children to die before their fifth birthday."

USAID Iraq Reconstruction Restoring Basic Health Services, February 24, 2004

By April 2004, the Ministry of Health had:[16]

- Assessed 240 hospital and 1,200 clinic facilities. 90% of the medical facilities had been looted after the war. Assessments concentrated on basic facility requirements, structure, power, and water. The assessment allowed the Ministry to develop a requirements document that outlined the needs (money) and prioritized resources. It also provided the ministry with the tools necessary to coordinate with international health organizations (also a strategic imperative) instead of building new, unsustainable structures, renovation and creation of local public health centers became the target
- Implemented a co-pay program, where citizens paid 250 dinar (approximately 25 cents US) per visit. This co-pay program has provided the Ministry of Health with $11 million dollars to date
- Rehabilitated the National Polio Laboratories
- Conducted assessments of 18 national public health laboratories
- Renovated 52 primary health clinics
- Established the Ministry's new Arabic-English web-site www.MOHiraq.org
- Implemented fair compensation of Iraqi healthcare professionals
- Developed a vision and strategies for creating a healthy nation

At present, the Ministry of Health employs a total of 103,000 staff, including 22,000 physicians and 35,000 nurses (~300 RN equivalent) and has:

- 240 public and 70 private hospitals and more than 1,200 operating preventive health clinics, open and operating as a result of support received from the international community
- A total of 29,000 beds (~50% occupancy)
- Provided 128 uninterruptible power system generators to keep healthcare facilities functional during power outages

Ministry of Health Inaugurates Ops Center to Respond to Health Emergencies Countrywide

"BAGHDAD – The Ministry of Health established an Operations Center (Ops Center) to coordinate, direct, and respond to health issues countrywide. While the Ops Center was part of extensive national contingency planning for possible terrorist attacks during the Arba'eean observance, it was pressed into service on April 8, 2004 to direct the Ministry's response to pockets of violence occurring throughout the country… The Ops Center is under the direction of Dr. Shakir al-Ainachi, Director General for Clinical Operations and Specialized Health Services, and includes working-level representatives from all key directorates within the MOH."

Iraq Ministry of Health Weekly Update, Vol. 45, April 14, 2004

An Iraqi Ministry of Health employee hard at work

Public Health

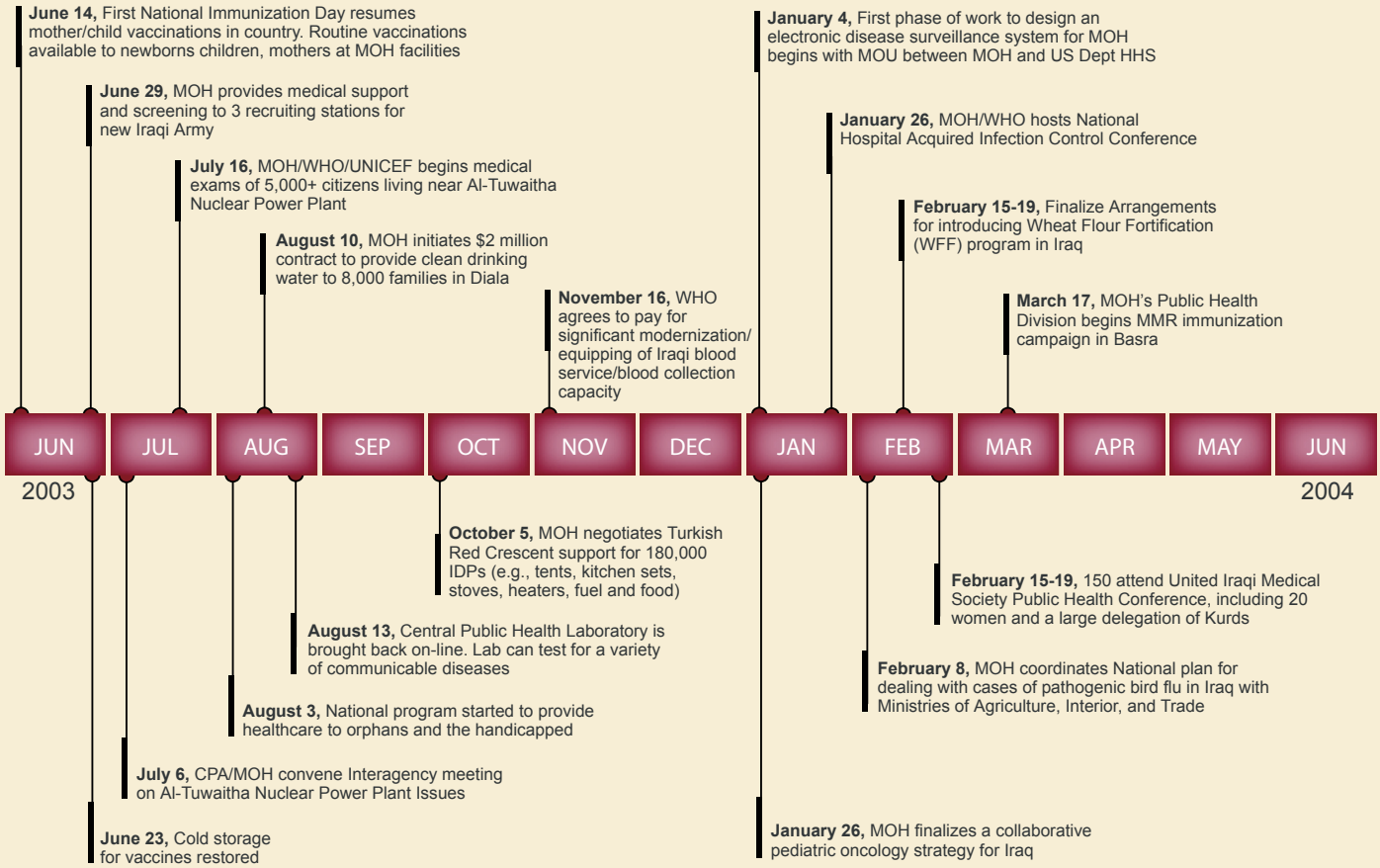
As stated in the Joint Iraq Needs Assessment published in October 2003 by the United Nations/World Bank, "Health outcomes are now among the poorest in the region. Maternal and infant mortality and malnutrition are high; certain communicable diseases have reemerged to join non-communicable conditions in a double burden of disease. Malaria, cholera, and leishmaniasis are endemic in several parts of the country."

Public Health Approach

The Ministry of Health team addressed immediate, mid-term and long-term issues associated with public health rehabilitation in Iraq and looked for opportunities to apply information technology to automate, streamline, and bring efficiencies into the public health and medical surveillance arenas. A primary goal in the public health arena was to improve infant mortality and morbidity rates in the near term. To do this, child immunization efforts were funded and given priority, as were programs to provide nutritional supplements to newborns, nursing, and pregnant women.

Specific short, mid, and long-term benchmarks were established such as:

- Reduce by 50% infant mortality rate by end of 2005
- By 2007, reduce the prevalence of iron deficiency anemia by 30% in women of child-bearing age (37%), pregnant women (61%), and preschool children (40%)[17]
- Prevent folic acid deficiency in women of childbearing age with consequent reduction of neural tube defects in newborns[18]
- Strengthen breastfeeding programs[19]
- Raise medical standards up to regional and international levels



Public Health Accomplishments

The timeline illustrates the key activities and achievements made by the Ministry of Health team dedicated to public health improvements. Many of the public health initiatives required significant coordination and collaboration with other Iraqi Ministries. Building partnerships with these Ministries for the common good is a continuing priority.

By defining and targeting public health issues such as immunization, nutrition, disease surveillance, and clean water across the diverse population, the Ministry of Health aims to reduce system inequalities and the burden of disease.

These along with many other public health initiatives were spearheaded by Dr. Mike McGovern and his Iraqi counterparts.

As mentioned previously, there was no major public health outbreak or crisis. Other accomplishments include:

- Home water purification, flour fortification and the reconstitution of national blood services
- Small outbreaks of measles and cholera were managed successfully
- Procurement of more than 30 million doses of vaccines[20] with support from UNICEF and USAID were established through the Expanded Immunization Program, a monthly immunization campaign that has reached 3 million children under five years old
- Successful integration of the former Iraqi Army medical professionals into the public health system (3,000 MDs, 12,000 ancillary professionals). This integration provided for a wide dispersal of healthcare professionals throughout the country–not solely centered on the metropolitan areas
- Tetanus vaccinations for 700,000 pregnant women
- Development of a standard pharmaceutical formulary, with potential to save the government and people of Iraq millions of dollars each year

Working Outside the Green Zone

The process model established by Mr. Haveman for the CPA's Ministry of Health team required that the team leave the Green Zone each day and conduct their work activities at the Ministry of Health Building. This required great courage on the part of the team, but also served as an example to the Iraqi staff, giving them the courage to come to work each day, in spite of the grave dangers involved.

In addition to the personal risks involved, the healthcare professionals working with the Ministry of Health faced a personal conflict as part of this daily routine. This conflict between being devoted to human healing and protecting yourself from personal attacks is described here by Dr. Craig Vanderwagen.

A family practice physician, Dr. Vanderwagen describes his lifelong commitment to healing as a member of the medical profession. However, the realities of the situation on the ground in Iraq created a conflict with this healing mission. Dr. Vanderwagen, along with his international teammates, believed strongly in the process model that required the team to work hand-in-hand with their Iraqi counterparts at the Ministry of Health Headquarters. This meant that the advisory team would need to travel each day from inside the relative safety of the Green Zone, through the streets of Baghdad, to the Ministry of Health headquarters building. This trip, to and from work each day, was a treacherous one. Many people had lost their lives traveling in coalition vehicles or convoys. The dangers of travel meant that military officers must load and carry their weapons, and serve as designated "shooters" for the trip to and from work each day. They would be assigned a position in the vehicle and a specific area to scout during the trip. Should a threat occur in their area of responsibility, their job was to shoot and take out the threat. For this portion of the workday, the healer became the armed security guard, ready, if necessary, to take out any obvious threats.

Dr. Vanderwagen with Iraq Ministry of Health colleagues

A Jordanian worker unloads medicine at Amman Airport on April 17, 2003

"In the year 2000, only 31% of Iraq's rural population used adequate sanitation facilities."

UNICEF–At a glance: Iraq–Statistics

- Full funding of the tuberculosis (TB) program and the first TB training workshop in more than 10 years was made possible by Dr. Maruzio Sforzi, an Italian tuberculosis expert, working with his Iraqi counterparts
- Declaration by the WHO that Iraq is free of polio
- Establishment of the "Survivors of Torture" clinic in Rusafa
- Development of new laboratory capacity, diagnostic capabilities, training and outreach support for observed treatment and case finding. The Central Public Health laboratory is operational and efforts are underway to improve collection and reporting mechanisms, with support from NGOs. Captain Dave Kvamme played a pivotal role in these efforts
- Distribution of supplementary food rations providing high protein supplements to more than 240,000 high-risk Iraqi citizens, including pregnant and nursing mothers and malnourished children.[21] A new program in rural areas provides supplies and training to birthing attendants and will benefit a total of 440,000 women
- Printed 5,000 registry books for recording immunizations[22]

Healthcare Logistics (Pharmaceuticals, Medical Supplies, and Equipment)

Another strategically important priority facing the team upon their arrival was the pharmaceutical, medical supply, and equipment procurement, inventory, and distribution system. The entire healthcare logistics system needed both immediate attention and a long-term improvement plan.

All drugs and equipment were handled through Kimadia, a centralized, multi-layered, highly bureaucratic clearinghouse and management system. According to Mr. Haveman, Kimadia ran a multi-million dollar a year enterprise, funneling off millions of dollars over the years to help support the former regime through a standard 10% service charge assessed on medicines, supplies, and equipment. By the time the medicines reached the population, Mr. Haveman explained, the mark up was significant. Before the conflict, Kimadia represented as much as 60% of the overall health budget, which came from the Oil for Food program, not from the Government budget. By comparison, in developed nations, pharmaceuticals, medical supplies, and equipment represent approximately 10% of a typical healthcare budget.

MOH Receives US $10 Million Lab Equipment Shipment

"Baghdad—Mr. Ammar Al Safar, Deputy Minister of Health for Operations, welcomed a delivery of state-of-the-art lab equipment to the Central Public Health Lab on Monday, March 29, 2003. The equipment is part of a U.S. $10 million shipment of lab equipment that will be delivered to sites across Iraq, including those in Baghdad, Mosul, and Basra."

Iraq Ministry of Health Weekly Update, Vol. 43, March 31, 2004

Sixty tons of medical aid being unloaded at Basra International Airport

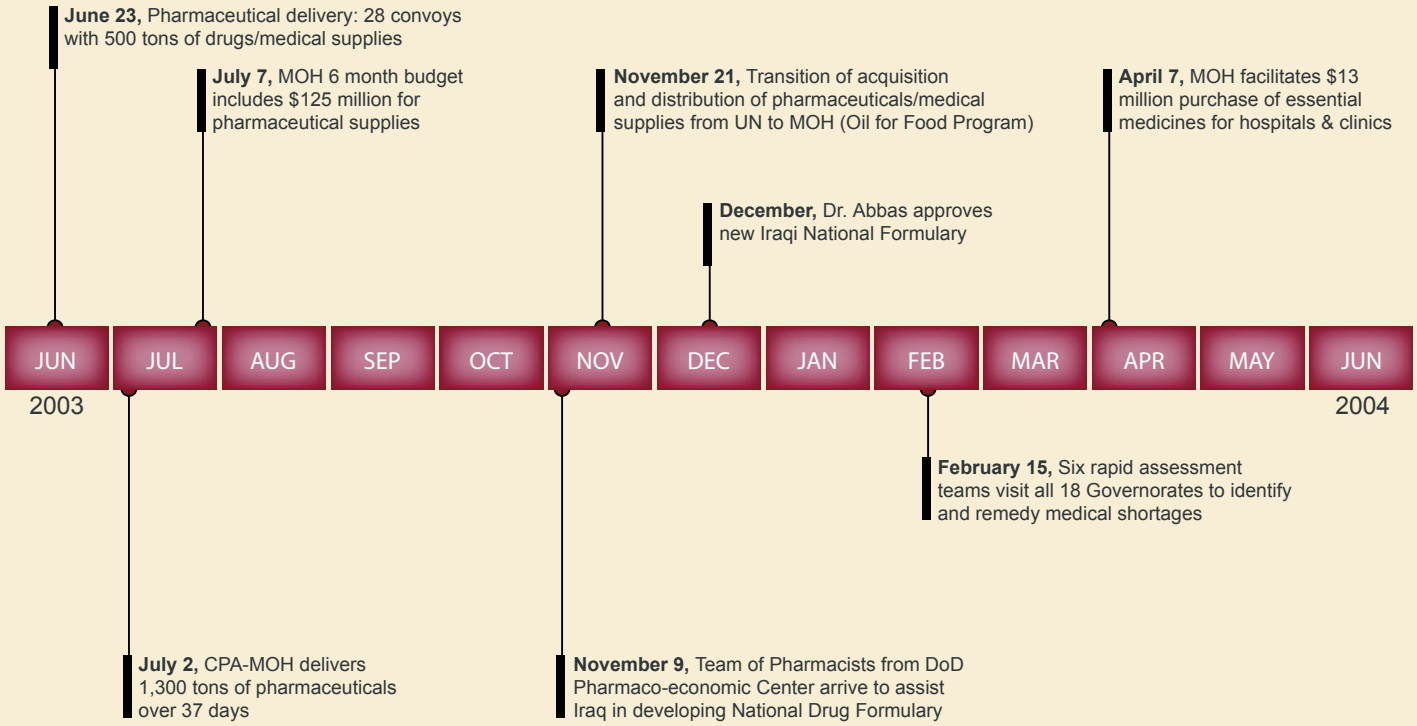
The CPA-Ministry of Health team discovered more than 4,300 drugs on Kimadia's "informal" formulary. Warehousing medicines up to a year in advance was common. Interviews with former CPA staff suggest that 50% of pharmaceuticals found in the 167 warehouses across the country were unusable. Some were as much as 30 years old.

Healthcare Logistics Approach

When examining the issues, the international team developed the following tenets to guide their approach to pharmaceutical reform:

- All drugs purchased with public money should be based on a formulary
- Private retail drug stores should buy from private pharmaceutical wholesalers
- Drug quality testing should not be needed for drugs and medical supplies certified by the European Union or by the U.S. Food and Drug Administration. However, modern countries need to develop and employ effective regulatory controls over drugs used in their countries. A strategic goal for Iraq is the formulation and introduction of regulatory controls in this sector

At its very heart, the procurement and distribution system for pharmaceuticals, medical supplies and equipment was broken and needed rebuilding from the ground up. This was going to require a diverse team of people with different skills and abilities to help design a new demand-driven system, responsive to all segments of the population, with automated inventory control mechanisms and security provisions to protect against reverting to the old business model. This diverse team included U.S. pharmacy experts including Lieutenant Colonel David Bennett, Captain Sean Stevens, Commander Brian Kerr, Lieutenant Colonel Mary Martin, Major John Howe, Lieutenant Commander Alicia Mozzachio, Mr. David Bretzke, Commander Ted Briski, Commander Gene DeLara, and Lieutenant Commander Scott Svabek and contracting experts Captain George Guszcza and Colonel Elias Nimmer. Positive change was going to require time. To address the pressing issue of drug distribution the CPA and Ministry of Health team took immediate action to get medical supplies and pharmaceuticals distributed and to reestablish vital programs.



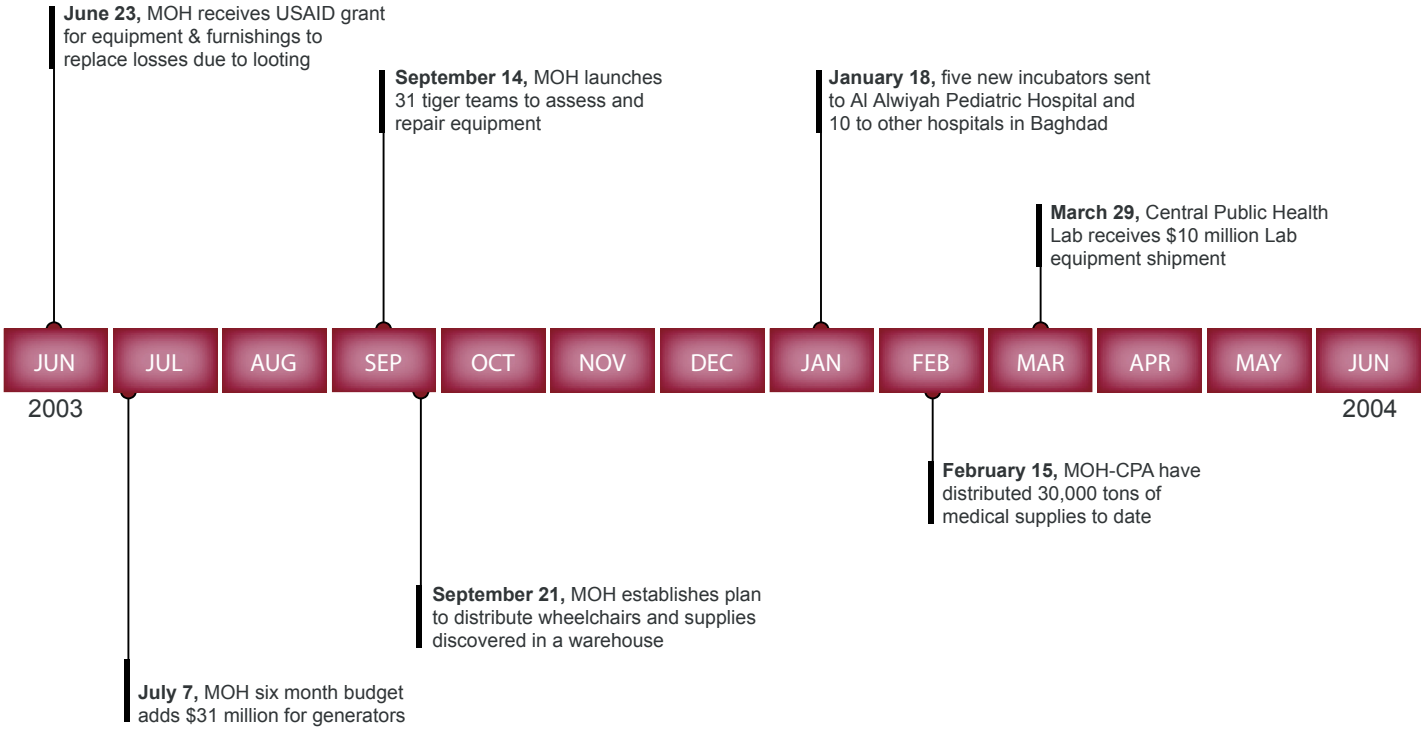
When they first began their assessments, the advisory team found that Iraqi Ministry of Health employees took orders to irrational extremes out of fear of reprisal. For example, employees were directed to validate quantities of receivable items. This order was interpreted to include opening boxes of sterile gloves and hand counting each glove to confirm that the quantity was consistent with that marked on the box. Clearly this practice ensured compliance with the orders but was not in the best interest of healthcare.

While these immediate actions were taken, an active effort was initiated to identify and address system deficiencies. From September through October 2003, tiger teams of biomedical engineers, technicians and managers conducted site visits of 200 hospitals throughout the 18 Governorates and identified 5,000 items in need of repair.[23] At the same time, a strategic planning process got underway to address the long term restructuring of healthcare logistics.

Healthcare Logistics Accomplishments

As the CPA-Ministry of Health team worked to improve the availability and the quality of pharmaceuticals across Iraq, some of the milestones they achieved include:

- Ending the Oil for Food Program in November 2003. The Ministry of Health developed transition plans for current Oil for Food contracts through Kimadia to a competitive program that emphasizes quality products at competitive prices
- Developing a standard formulary with 1,362 entries. The new formulary was developed to include pharmaceuticals that reflect current standards of care in developed countries. For example, the new formulary includes state-of-the-art cancer drugs and other pharmaceuticals to help address chronic disease management and provide better quality care and better health outcomes for the population. This revised yet abbreviated formulary, developed by a working group of Iraqi healthcare professionals along with coalition advisors, improved overall treatment options
- Procuring and distributing 30,000 tons of medicines and supplies by May 2004



- Accepting donations of pharmaceuticals and medical supplies from Wake International Consortium/Czech Republic, Associazione Nazionale Italia-Kuwait, Iraqi Foundation, ICRC, USAID, South African Offer, Mercy Malaysia, Lebanese Government, Umanitaria Panda Onlus/Italy, ADRA Germany, INTERSOS/Italy, Mennoite Central/ Canada, AMI, Interbyant S.A. Switzerland, Hilfswerk Austria, WHO, Abt Associates, Islamic Relief, MDM/Spain, Global Care Korea, Human Appeal (UAE), and Adra Czech Republic
- Continuing efforts to eliminate outdated drugs, equipment; eliminate unnecessary testing, and shorten the drug supply pipeline

The medical supply timeline illustrates the milestones associated with improvements to Iraq's medical supply line. Some of the highlights include:

- Distributing 600 medical supply kits to newly refurbished clinics. Kits include basic equipment such as sterilizers, scales, stethoscopes, exam tables, privacy curtains, desks, and laboratory supplies
- Repairing 1,700 pieces of biomedical equipment in clinics throughout the country
- Providing approximately U.S. $5 million of laboratory equipment and supplies to re-establish the Central Public Health Laboratory in Baghdad, National Center of Drug Control and Research, the Nutritional Research Institute, and regional and Governorate public health laboratories[24]
- Securing U.S. $2 million contribution from WHO to modernize central blood banking facilities/blood banking system/services, to include facilities, supplies, inventory, and the logistical processes needed to maintain a viable blood program throughout the country

The immediate actions taken by the team re-established security and infrastructure stability, and addressed public health and healthcare logistics concerns. The long-term planning efforts to rebuild the Ministry of Health are discussed in the next section.


المركز الطبي
MEDICAL CLINIC


ثورة الحسين

Mapping the Future and Creating the Sustaining Foundation

Leveraging the accomplishments of the DART, Civil Affairs, and ORHA teams, the CPA put into place a plan to address the immediate priorities facing the Iraqi people. Next the team, including significant contributions from Mr. Haveman, Mr. Goodwin, Colonel David Adams, Ms. Diana Tabler, and Lieutenant Colonel Backes, began to focus their efforts in a more strategic and long-term manner. This strategic planning initiative generated the roadmap for addressing mid-term and long-term concerns for the development of a fully integrated and sustainable healthcare system.

A group of Iraqi women stand in line to receive fresh drinking water in Amarah, central Iraq, on April 13

The strategic vision of the Ministry of Health is to provide a comprehensive healthcare system that is financially sound and assures quality care that is accessible, affordable and available regardless of ethnicity, geographic origin, gender, socioeconomic status or religious affiliation.

Strategic Planning Initiatives

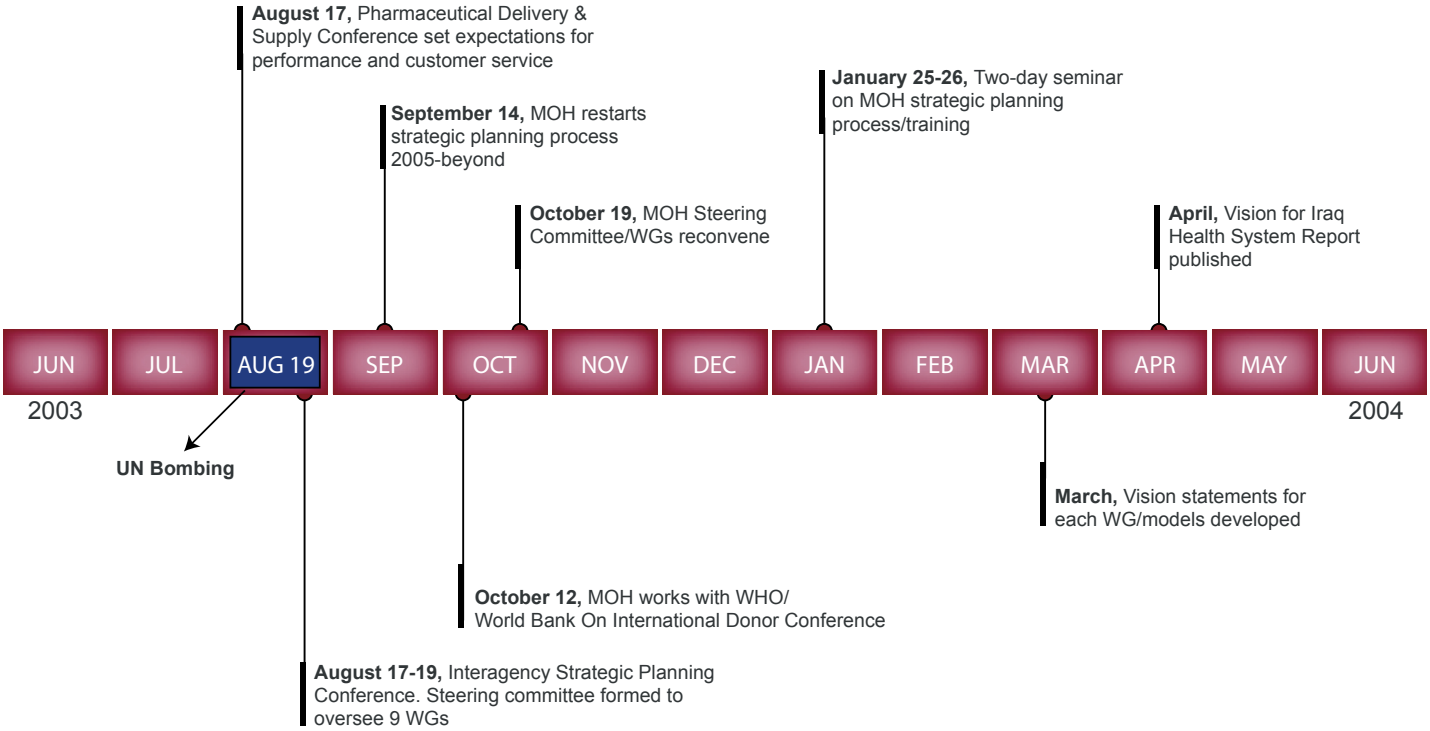
Two levels of strategic planning were required to restore effective services in Iraq during this period and to redirect the focus towards the future. The first level of planning emphasized addressing the immediate physical infrastructure needs of the Ministry–ensuring facility integrity, addressing basic security issues, identifying infrastructure gaps, and working with other CPA teams to improve conditions as quickly as possible. While these infrastructure requirements were immediate in nature and implied a somewhat tactical approach, the intricacies involved and the associated timeline demanded a strategic view of the requirements and development of an overarching roadmap to ensure timely and prioritized expenditure of resources.

The second level of strategic planning focused on creating a long-term vision for healthcare in Iraq. It initiated restructuring measures to redirect and to refocus activities towards more systemic functions and to stimulate preventive measures rather than reactive responses.

Strategic Planning Approach

Instituting a fundamental shift in thinking, planning, and implementation is not a short-term investment. It requires a vision created by national leadership in collaboration with local Governorate decision makers. The vision must be supported by a roadmap of actionable objectives and intermediate steps that are supported by participants at all levels of the Ministry.

The Ministry of Health, partnering with the CPA and international health organizations, implemented a process of re-engineering itself by raising the standards and by committing to preventive rather than reactive healthcare. The re-engineering was institutionalized through nine working groups focusing on different dimensions of the sectors. These working groups were initially formed at a three-day international strategic planning conference called the "Priority Setting Workshop" held in August 2003.



Representatives from the Ministry of Health, CPA, European Commission, World Bank, WHO, UNICEF, CARE, Iraqi Red Crescent Society, USAID, Combined Joint Task Force-7, and Regional Health representatives throughout Iraq were invited to participate in the strategic planning process. With over 120 participants meeting more than 40 times in their first year, these working groups identified and pursued a very precise set of goals and objectives. The working group process provided a forum for open communication between and among the participants, including the Ministry of Health leadership, international donor groups, and non-Governmental organizations.

The intent was to evaluate the "as is" situation and work together to create a vision for the future of the Ministry of Health. Each of these working groups defined an overall objective, thereby, mapping the path to the future. The resulting groups, which are described as follows,[25] examined and continue to examine issues critical to the vitalization of Iraqi healthcare. With international support and regional commitment to improvement, the Ministry of Health and CPA envisioned a system that will become a model for others to emulate. The timeline above depicts key events in the Strategic Planning process.

Ministry of Health employees discussing healthcare issues

The UN Bombing: A Turning Point

During the three-day Strategic Planning Meeting the participants took advantage of the opportunity to network and collaborate. Mr. Haveman recalls that he and Dr. Hakki had invited a group of participants to join them for dinner. Before leaving for dinner, many of the team returned to the UN Compound to conduct meetings and read e-mail. It was during this time that a bomb exploded at the UN, killing 17. Mr. Haveman recalls that four of those participating in the MOH meeting were injured and treated successfully at the Baghdad Medical City. In fact, one of the doctors treating the injured was also part of the MOH meetings. Ironically, Mr. Haveman notes that the bombing, coming on the heels of such a successful set of meetings, created a sense of resolve among the healthcare team. In fact, he views this tragic event as a significant turning point in the overall process.

Group 1: Public Health

Objective: Establish the principles and processes by which the peoples of Iraq can reach their optimal level of overall health, through development of benchmarks for health outcomes, ensuring meaningful health promotion to the community and by defining those public health tasks and targets that can reduce inequalities and produce the greatest health gains in diverse communities.

Group 2: Healthcare Delivery

Objective: Production of a model for the evolution of a healthcare system, where the authority, decision making, accountability and standard setting are shared from bottom to top and is markedly responsive to the needs and wants of all the peoples of Iraq, while remaining cognizant of economic realities, aiming at equity, accessibility, affordability, and quality of all services, including a basic service package that should immediately be available to all.

Group 3: Health Information Systems

Objective: Establish the principles, standards, and process that will provide for the effective collection of reliable health information that will form decisions at each level of the healthcare system to improve the health of Iraqis and their system and quality of healthcare delivery.

Group 4: Healthcare Finance

Objective: Produce an optimal equitable healthcare financing model, taking into account expected public revenue, per capita income and income distribution, which will also maximize the opportunities for the Iraq healthcare system to evolve over time, ensuring a minimum services package.

Group 5: Human Resources

Objective: Establishment of the parameters for all of Iraq to identify the numbers, types and geographic distribution of licensed medical personnel, allied health professionals and administrative staff employed within and outside MOH using a ten-year time horizon.

"The most important thing that I feel we accomplished is giving the Iraqi health professionals the hope and belief in themselves and belief that their vision is manageable and achievable."

RADM W. Craig Vanderwagen, MD, U.S. Public Health Services

Dr. Winkenwerder discusses needed improvements to the medical libraries with an Iraqi doctor

Group 6: Education and Training

Objective: Provide for healthcare and allied personnel education and training curricula that will better enable healthcare providers to meet the vision, management and clinical objectives of the future Iraqi healthcare delivery system.

Group 7: Licensing and Credentialing

Objective: Identification of types of medically related personnel credentialed or licensed, standards used, and the process for credentialing and licensing.

Group 8: Regulation and Legislation

Objective: Recommendation of all necessary legislative, regulation and policy changes that will be needed to implement the Ministry of Health's proposal for an "Iraq Healthy and Free".

Group 9: Pharmaceuticals, Medical Supplies & Equipment

Objective: A definitive proposal to modernize the purchase, storage and distribution process of pharmaceuticals and medical supplies, which will include policies to ensure the appropriate use of pharmaceuticals and medical technology by the Iraqi people.

Strategic Planning Accomplishments

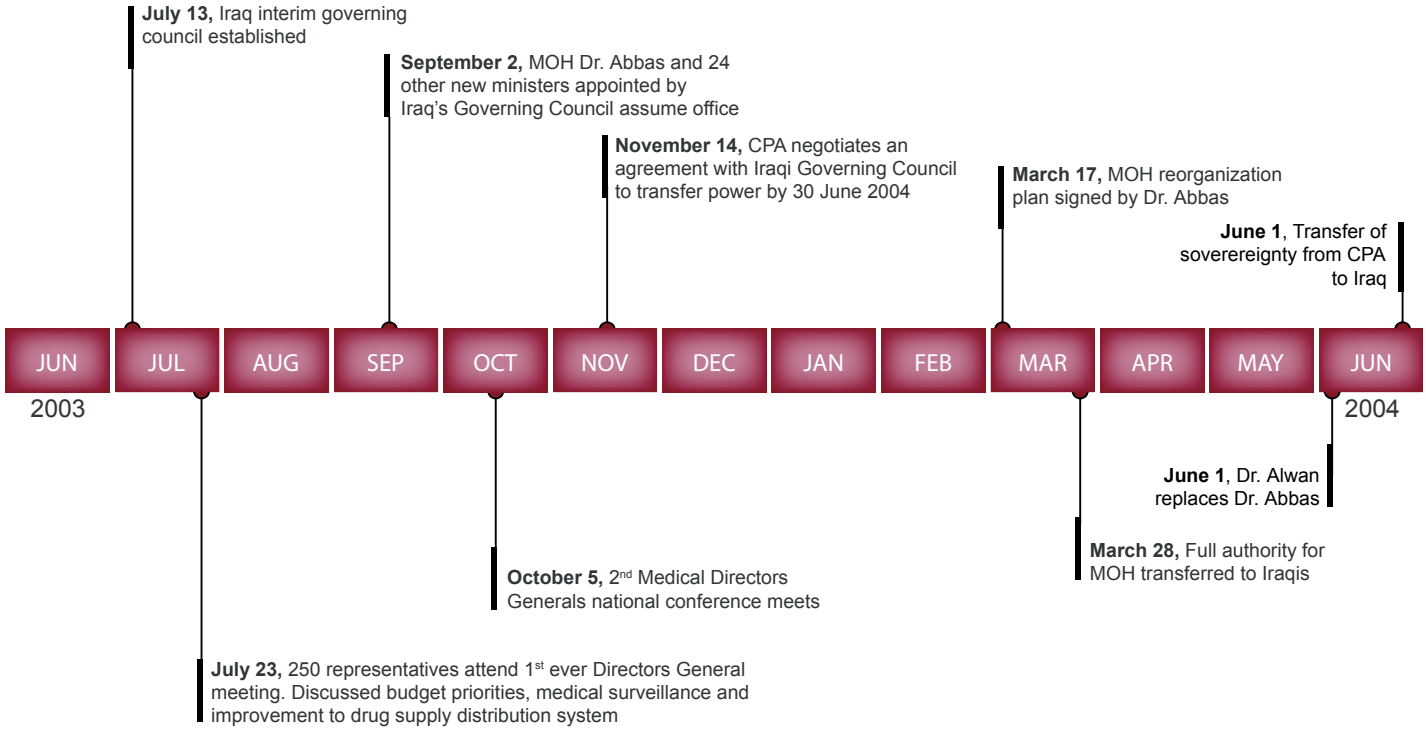
In addition to work on the nine specific working groups, the strategic planning participants quickly discovered the logical and inevitable linkages between and among their charters. As a result, a second stage of the planning process was initiated–the Linkages Meetings. Linkages Meetings included two to three members of related working groups. This expansion and open communication demonstrates the empowerment of the groups and promises continued progress on the path to the strategic vision.

Warroud Hassan gently returns her baby Eessa Ahmed to an incubator in Baghdad al-Iskan Children's Hospital on April 23

Iraqi Amputees Receive Treatment in the United States

In May 2004, the U.S. welcomed seven Iraqis to receive specialized medical care to repair disfiguring injuries received at the hands of the former Iraqi regime. Each of these men suffered hand amputations at Saddam Hussein's Abu Ghraib prison for allegedly having done business in a foreign currency in 1995.

Qasim Ghida Kadhim, Laith Niema Aqar, Salah Hasan Zinad, Nazaar Abdulridha, Ala'aHassan, Basim Ameer, and Hassan Al Gereawy were welcomed at a White House event in May, along with Dr. Joe Agris. Dr. Agris along with Mr. Don North spearheaded their trip and their treatment and Dr. Agris fitted the victims with their new prosthetic devices. From the Oval Office, President Bush is reported as saying, "I'm honored to shake the hand of a brave Iraqi citizen who had his hand cut off by Saddam Hussein with six other Iraqi citizens as well who suffered the same fate... They are examples of the brutality of the tyrant."



Organizational Infrastructure

Consistent with the overall CPA and the interim Iraqi Government, the Ministry of Health was structured around the 18 Iraqi Governorates shown in the table below. Each Governorate is managed by a Governor who is supported by 23 Directors General to focus on specific functional areas. These Directors General include a Medical Director General in each of the 18 Governorates to coordinate local healthcare. The CPA and Civil Affairs teams not only left the Green Zone to work at the Ministry of Health offices in Baghdad, they also traveled extensively around the entire country, working with Iraqi professionals in each of the 18 Governorates.

18 Iraqi Governorates	
AL ANBAR	BAGHDAD
AL BASRAH	DAHUK
AL MUTHANNA	DHI QAR
AL QADISIYAH	DIYALA
AN NAJAF	KARBALA
ARBIL	MAYSAN
AS SULAYMANIYAH	NINAWA
AT TA'MIM	SALAH AD DIN
BABIL	WASIT

Governance Approach

Prior to the liberation, the Ministry of Health, like all of the Iraqi Government, was highly centralized in Baghdad. A key goal of the new Government was to introduce and establish a decentralized model that empowered leadership at the local levels. The Ministry of Health Senior Advisory Team took a proactive approach, pursuing this goal not only on paper, but instilling actual behaviors that would sustain such a decentralized approach over time and would make the system more efficient by empowering the Iraqi people in the decision-making process.

Left to Right: Dr. Harvey Fineberg, Ambassador Rend al Rahim Franke, Dr. William Winkenwerder, Dr. Ala'adin Alwan, Dr. Khudair Abbas, Dr. Mahmood Thamer, Mr. James Haveman, Dr. Naeema Al-Gasseer at the Symposium on reconstructing the Healthcare System in Iraq on August 11, 2004

Ministry of Health Observes Ashura Holiday

"BAGHDAD – Last week MOH employees hosted a program to commemorate the Ashura holiday. Dr. Khudair Abbas, Minister of Health, delivered remarks to the gathering. Ceremonies and commemorations such as this were prohibited under the former regime. The MOH ceremony was one of many that passed without incident prior to the violence that marked events in Karbala and Baghdad on March 2, 2004. Many such ceremonies were held in Baghdad and other cities across Iraq to honor the memory of Iman Hussein, a descendant of the prophet Muhammed, killed in battle more than 13 centuries ago. Many Iraqis see the tale of Iman Hussein as a model for fighting injustice and tyranny. Ashura is among the most holy of days in the Shi'ite calendar and is also observed in countries including Afghanistan, Azerbaijan, Bahrain, Lebanon, Pakistan, Saudi Arabia and Syria and is commemorated in Shi'ite communities across the globe."

Iraq Ministry of Health Weekly Update, Vol. 39, March 3, 2004

"Iraq's greatest asset is its people. They are resourceful, intelligent and have tremendous inner strength. They have made it through oppression, violence and intellectual isolation and they will make it through current difficulties. They will succeed in building a new Iraq."

Mr. Robert Goodwin, Former Deputy to the Senior Advisor, CPA Health Advisory Team

Ministry of Health employee poses for the camera

Early strategy and planning sessions took on a highly collaborative focus, integrating all team members into the process and giving the Iraqi participants, working side-by-side with CPA international professionals, a voice in determining their own future. This also provided a forum to begin the much needed mentoring of staff at all levels in management and decision-making processes. Only through such an actively inclusive process was there any hope of creating an operational, functioning, decentralized structure that would include each of the 18 Medical Directors General.

The strategic planning/working group process established health sector functions, institutional structures, roles and responsibilities, and tenets related to infrastructure stability.

These included:

- Decentralizing the health system while centralizing the health financing function
- Using a standard national health information system for routine data submitted to the Ministry of Health
- Stabilizing the size of the Ministry of Health (not increasing)
- Retaining policy, regulation, and finance functions within the Ministry of Health while delegating some functions to other health institutions to increase transparency and efficiency

In addition to the formal strategic planning efforts, the CPA team provided ongoing advice and assitance to the Ministry of Health team while, concurrently, the Military Civil Affairs teams' health sector staff assisted the local Governorate level teams in planning and managing their activities with extensive use of the Commander Emergency Response Program (CERP) funds.

An international team, including Mr. Haveman, participate in the MOH-CPA Priority Setting Workshop in August 2003

MOH Solidifies Medical Care Agreement with Iraqi Armed Forces

"BAGHDAD—On Sunday, the MOH Clinical Operations and Specialized Services Division signed a Memorandum of Agreement concerning medical support to the Iraqi Armed Forces (IAF). The agreement lays out the roles and responsibilities for the Ministry and the IAF regarding medical care for recruits and active service members. The MOH will provide all healthcare including essential supplies and equipment necessary for the Iraqi armed forces to train for and perform its mission in helping secure Iraq."

Iraq Ministry of Health Weekly Update, Vol. 36, February 11, 2004

Governance Accomplishments

In October 2003, the Ministry of Health held a conference with all 18 Medical Directorates. This conference focused on financial and budget concerns, preventive healthcare, primary health center issues, and distribution of pharmaceuticals and medical supplies.

The following list of milestone events demonstrates that the Medical Directors General have accepted and integrated their decentralized roles:

- In November 2003, the Ministry of Health and Directors General met to set priorities for 2004 construction and training[26]
- In December 2003, following the Eid al-Fitr holiday, the working groups met to discuss crosscutting issues and interdepartmental coordination–a wholly new concept for the nation-wide team[27]
- In January 2004, representatives from the Ministry of Health and the Governorates gathered at the Ministry's headquarters building for a National Conference on control of acquired infections[28]
- In March 2004, Governorate representatives participated in an Immunization Training Conference at the Ministry of Health Headquarters[29]
- In March 2004, a train-the-trainer program in primary healthcare was held in Mosul and An Najaf. This program will ultimately be held in all of the 18 Governorates with the goal of training 2,500 staff[30]
- A campaign to immunize 400,000 children against Measles, Mumps, and Rubella began in March in Basra and will continue across all Governorates. The campaign will supplement and focus attention on the standard National Immunization Days which occur on the 22nd day of every month at all Ministry of Health Facilities[31]
- Budgets were decentralized and funds were deposited in Governorate banks for Health Director's General to plan and spend according to their own local needs

USAID helped Dr. Sinor Qadir treat and educate Iraqi people who survived Saddam Hussein's nerve gas attacks. She visits villages and provides medical care and training to local citizens. The project, supported by USAID with a $7,000 grant for three months was carried out in cooperation with the Coalition Provisional Authority.

USAID website https://www.usaid.gov/stories/Iraq

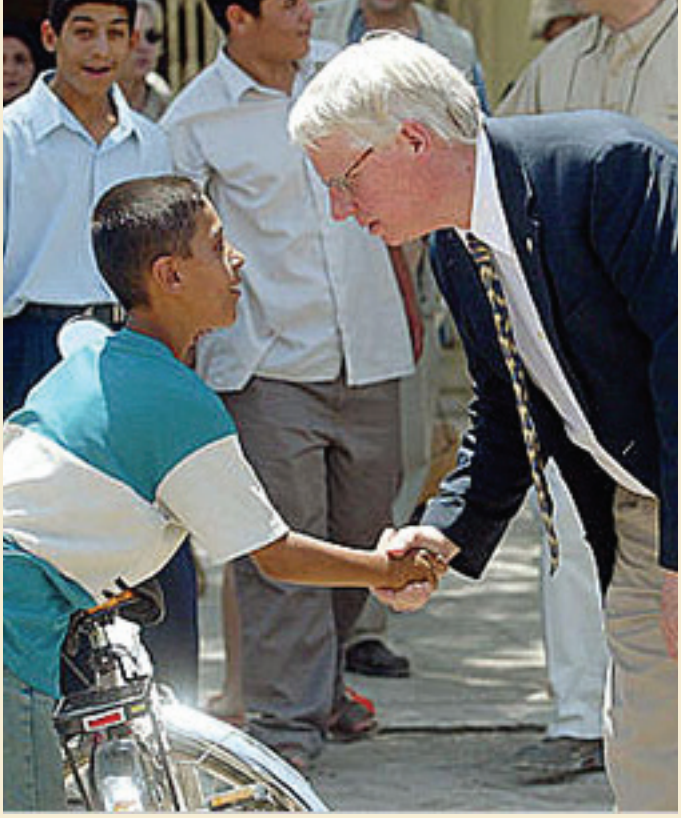
Iraqi Ministry of Health employees
consult on the use of their new computer equipment

Professional Training and Development

Perhaps nowhere was the decline of the Iraqi healthcare system more profound than in the area of professional training and development. Since the end of the 1970s, Iraq's universities, medical schools, and most importantly, its students, were deprived of updated teaching manuals and reference materials. Without investment in technology infrastructure, the knowledge databases commonly used across the world and on-line technical journals were not accessible. As the world of medical education and advancements outside Iraq's closed society progressed at a furious pace, those in Iraq were cut off from each other and from the research, professional, and scientific communities outside the country. The intellectual frustration of medical personnel was real and immediately apparent to the team upon their arrival. However their drive and eagerness to learn, establish, meet, and exceed standards was also immediately evident.

There was no way to ensure that patients, who were being treated, were being treated by qualified providers. Up-to-date training and education were not provided, and licensing and certification processes were non-existent. Moreover, no formal or informal public health education existed outside rumor, culturally-based norms, and fear.

The team, including Colonel Dave Adams and Colonel Linda McHale, also found the state of nursing care to be in crisis. Educational and quality standards and guidelines for nurses and nursing care were informal and needed to be upgraded, and institutionalized. The pre-conflict curriculum for nurses (sometimes requiring no more than an eighth grade education) did not include basic mental health services or post-trauma care. Fundamental clinical training was also rare.



Mr. Jim Haveman greets an Iraqi youth at the Al Bayaa Public Health Clinic in Baghdad on June 2

During his entire stay, Mr. James Haveman recalls fielding five to six calls a day from people and organizations around the world eager to donate medical equipment, provide training, or other needed materials. The difficulty was that these were not "turnkey" offers. The donors needed someone else to provide transportation, cover transportation costs, provide safe housing, or some other critical element to seal the deal. Not without a note of frustration did Mr. Haveman routinely have to turn away these offers of help because providing the logistical support required to transact the donation was beyond the scope and reach of his position.

"WASHINGTON – Secretary of State Colin Powell welcomed the 25 Iraqi participants in the Fulbright International Scholarship Program to the U.S. State Department on Monday, February 2, 2004. Among the group were eight who will begin their advanced studies in various health fields later this year. This group marks the return of Fulbright scholars from Iraq to the United States after a 14-year hiatus. The U.S. Government suspended the Fulbright program in Iraq in 1990 when Saddam Hussein denied Iraqi scholars the freedom to travel abroad… The group also met with U.S. President George W. Bush at the White House on February 4, 2004… The public health scholars include":

- **Shaheen Riadh Jihad Abdullah**
- **Atheer Ja'afar Ahmed**
- **Fadi Abdul Ahad**
- **Ahmad Mahmud Al-Hadidi**
- **Farhad M. Saleem Mohammad Hasan**
- **Chalak Najab Muhammad**
- **Ali Muhammad Hama Amin**
- **Lazha A. Talat**

Iraq Ministry of Health Weekly Update, Vol. 35, February 4, 2004

Iraqi Doctors and Nurses Receive Training in Egypt

"CAIRO–Last week, Mr. Ammar Al-Saffar, Deputy Minister for Operations, attended the opening of a joint Japanese, Iraqi and Egyptian effort to supplement and update the clinical skills of approximately 100 Ministry of Health physicians and nurses. The trilateral medical training program will continue for four-weeks and will help update the skills of those Iraqi's attending. These physicians and nurses will receive instruction in intensive care practices, nursing procedures, and endoscopic surgery."

Iraqi Ministry of Health Weekly Update, Vol. 41, March 17, 2004

Training class in session

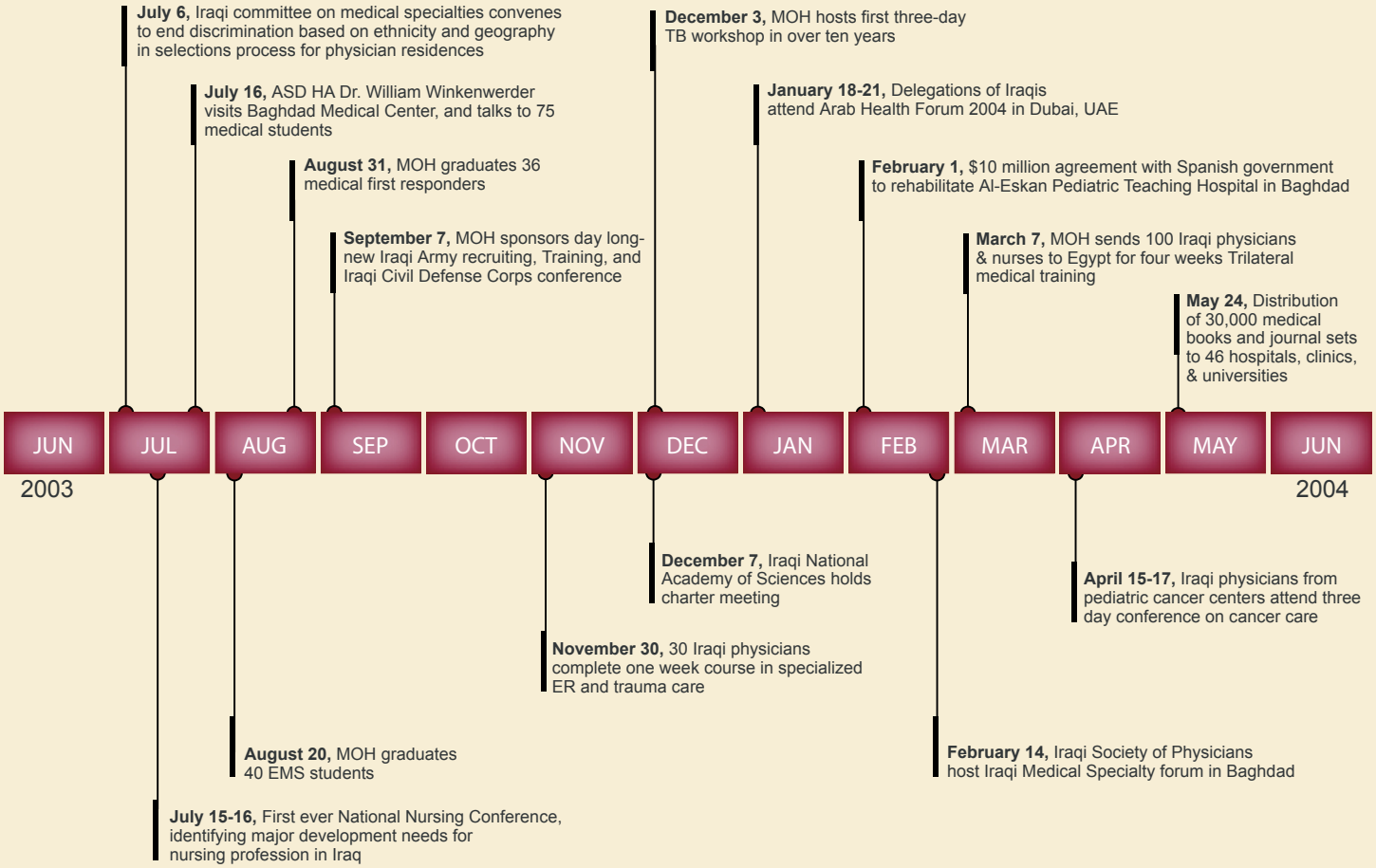
Professional Training and Development Approach

While the ramifications of the closed Iraqi society were negative and far-reaching, the solutions developed to combat the lack of public education and professional training were simple and straightforward.

Although there are 15 medical schools, seven colleges of pharmacy and six dental schools in Iraq[32], open communication was not characteristic. By allowing and facilitating information to flow freely into the country and affording Iraqi healthcare professionals with opportunities to seek training (both inside and outside the country), professional skills and competencies will rapidly advance. They will learn new skills, absorb best practices, deliver quality care to their patients, and put into place safeguards, standards, and quality control mechanisms.

To combat the magnitude and the reach of the professional training and development problem quickly, a train-the-trainer model has been adopted to the greatest extent possible. When someone receives training (either in country or anywhere in the world), they share their newfound knowledge and skills with their colleagues locally and with colleagues from across the 18 Governorates. Professional training and development includes attending conferences, training programs, and access to up-to-date scientific and medical journals. In addition, the Ministry of Health has begun efforts to develop and determine policies and procedures associated with credentialing, licensing, and regulating their industry. Healthcare representatives from across the country are actively involved in this empowering process.

The international community has stepped up to provide access to current training. Much training has already been accomplished and much is also in the planning stages. For example, Japan and Egypt are currently planning a professional training forum for physicians and nurses. This forum is expected to include travel to Cairo and Tokyo over the next year for more than 100 medical professionals.



To address the nursing crisis, many coordinated actions are being taken. The previous five-tier nursing classification system is being eliminated in favor of a new expanded, enhanced nursing model. Changing cultural attitudes about nurses and their functional roles within the healthcare community will take time and must be coordinated through a rigorous public education campaign. However, this strategic change in resource utilization will have profound impact on the overall capability and efficiency of the system. In the short-term, many training opportunities are being availed to ensure this long-term benefit.

Professional Training and Development Accomplishments

The timeline above illustrates the many events, achievements, and accomplishments in the professional training and development area. To many observers outside the coalition team, the act of sending, for example, four Iraqi pediatric physicians to a three-day conference on cancer therapeutics in neighboring Amman, Jordan[33] may seem insignificant, but to the Iraqis, each professional development trip planned and taken is an enormous step forward and can reap exponential benefits due to the train-the-trainer concept.

Other accomplishments include:

- Training over 8,000 health workers in diagnosing and treating malnourished children[34]
- The Ministry of Health convened a committee on medical specialties. The goal of this session was to seek ways to end discrimination based on ethnicity and geography in the selection of physician residencies[35]

MOH Advisor Participates in First Meeting of the National Academy of Science in Iraq

"BAGHDAD—Dr. Mahmood Thamer, a member of the CPA-MOH staff, participated in the charter meeting of the Iraqi National Academy of Science. The Academy is a body of distinguished scientists dedicated to employ their talents for the advancement of science in Iraq. It is an autonomous self-governing entity established in Iraq in accordance to the law, as a public benefit society."

Iraq Ministry of Health Weekly Update, Vol. 27, December 11, 2003

Dr. Mahmood Thamer celebrates a year of success for the MOH at the conference on August 11, 2004

- A National Nursing Conference to open dialogue on the future of nursing was held in July 2003[36]. This leadership conference focused on steps needed to "rebuild" nursing careers in Iraq including the development of a comprehensive plan for improving training and education
- A total of 76 first responders received Emergency Medical Services (EMS) training[37] by the end of August 2003, "to form the nucleus of a budding Iraqi medical first responder program." This train-the-trainer cadre then reached over 500 people in Baghdad and northern Iraq. Follow-on training for 30 physicians occurred in November with a week-long course focusing on specialized emergency room and trauma care[38]
- In support of the Ministry of Health's capacity building strategy to reduce the current infant/child mortality rates throughout Iraq, 45 physicians received two-and one half days of Advanced Life Support for Obstetrics training[39]
- For the first time in over ten years, the Ministry of Health hosted a three-day training workshop on TB for laboratory technicians[40]
- Sixty-five nurses graduated from a Nursing Fundamental Course and approximately 80 nurses have completed a "train-the-trainer" Nursing Fundamental Course. Each Governorate will organize training courses using the trainers to upgrade skills and competencies[41]
- Training of Nurses and Midwives: A grant to the Iraqi Nursing Association will support the recruitment and training of hundreds more women nurses and the purchase of new uniforms, bed linens and nurses' kits. Currently, there are only 300 trained and licensed women nurses in Iraq
- CPA South and the Director of the Teaching Hospital in Basra developed a nurses training course in emergency care and general nursing. In May 2004, 24 nurses from Basra took part in the first of three week-long intensive Emergency Care courses at the Teaching Hospital[42]
- Distributed over 30,000 medical books and reference material to 46 medical hospitals, clinics and universities throughout Iraq. Ministry of Health, CPA, Elsevier Foundation, Nour International Relief Aid, American Medical Association, Life for Relief and Development, and the U.S. based support team worked together to make this distribution possible[43]

Relief shows on a mother's face as her sleeping child recieves much needed medication

More Than 150 Health Professionals Attend Health Policy Conference

"BASRA—On March 23 and 24, the United Iraqi Medical Society conducted a Public Health Conference in Basra. More than 150 health professionals took part in the conference, including 20 women and a large delegation of Iraqi Kurds who traveled from the north…This conference is part of a nationwide Civic Education Program being implemented through USAID's Local Governance Program to help educate Iraqis on the transition to democracy. Through this and other similar forums, Iraqis have the opportunity to engage in discussion on government policies and to shape future policy decisions."

Iraq Ministry of Health Weekly Update, Vol. 44, April 7, 2004

Sixty-Five Nurses Graduate from Nursing Fundamental Course

"A ceremony was held at Al Mansour Hospital on Wednesday, May 12 to commemorate the completion of three nursing fundamental courses recently conducted at the hospital. Dr. Nima, Director General of the Primary Care and Preventive Health Directorate, Colonel Linda McHale and Lieutenant Colonel Ken Backes attended the ceremony recognizing the 65 nurses completing the one-week course which focused on refreshing basic clinical skills and improving patient care. The Nursing Fundamental course is the first of many such classes envisioned by WHO and CPA as the Iraqi Nursing Strategic Plan is implemented. About 80 nurses throughout Iraq have completed the "Train-the-Trainer" Nursing Fundamentals course sponsored by WHO in Amman, Jordan. Each Governorate will organize courses within its region to upgrade the level of nursing skills of nurses in hospitals. Also attending the ceremony were the Directors of Nursing for area hospitals, and professors and teachers from the nursing colleges and schools. A presentation was made by Ms. Farida Sadik, the Director or Nursing Education and by Dr. Ali Al-Joori, the president of the newly formed Iraqi Nursing Association."

Iraq Ministry of Health Weekly Update, Vol. 48, May 13, 2004

An Najaf Residents Welcome Rehabilitation of Al Nasir Primary Healthcare Center

"AN NAJAF—On Wednesday, April 7, 2004, the MOH and the residents of An Najaf welcomed the first steps toward the rehabilitation and expansion of the Al Nasir Primary Healthcare Center. Begun under USAID's Community Action Program, the clinic will serve 50,000 residents and is located in a predominantly Shi'ite area which suffered years of neglect under the former regime. The residents of Al Nasir elected a 12-member group in October to represent their interests in local rehabilitation plans and identified the rehabilitation and re-equipping of this center as their highest priority. The scope of work will include the addition of an emergency ward and a delivery room, as well as the purchase and installation of medical equipment."

Iraq Ministry of Health Weekly Update, Vol. 45, April 14, 2004

Newborn baby sleeping beside mother's hospital bed

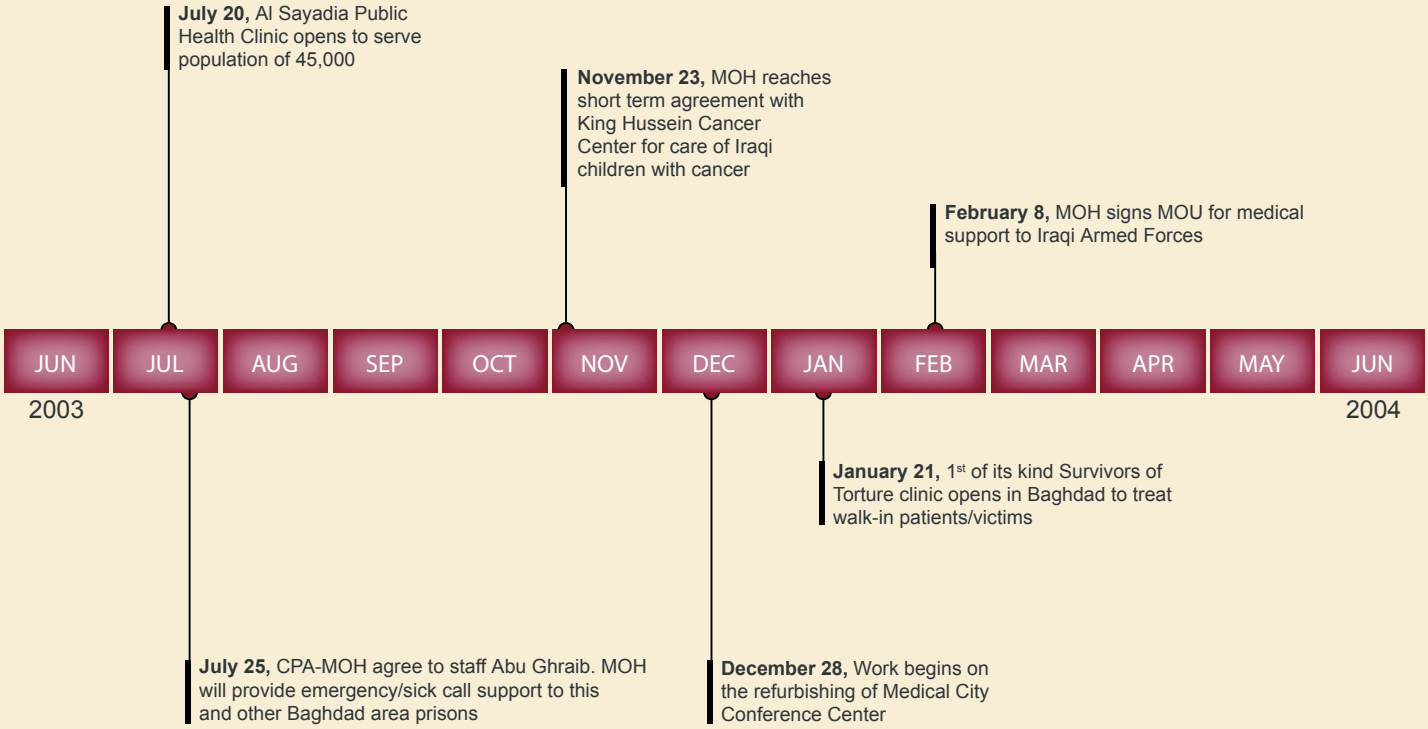
Primary Care Model

At one time during the 1970s, Iraq's healthcare system was on par with others within the region. Although primitive in some aspects (e.g., rural medicine), the system had the capability to address the needs of the population. System funding was adequate, medical supplies were available, and healthcare professionals were trained and maintained their skill sets at a pace with the rest of the world.

In the late 1970s through the 1980s, the Iran/Iraq war took its toll on the healthcare system. By the early 1990s the system was functioning on a less than optimal capacity. The advent of the Oil for Food Program exacerbated the situation. Health professional continuing education decreased at an alarming rate, rural healthcare delivery waned, and care was only available at hospital facilities. The healthcare system became a highly-centralized, politicized model that over-served some segments of the population while under-serving or neglecting others. Sixty five percent of births occur outside of the health institutions. The proportion of women delivering without trained assistance averaged 30% in urban and 40% in rural areas. The result was seen in increased morbidity/mortality rates.

Under the "old" paradigm, physicians would see patients at the hospital as part of their governmental obligation during the morning and early afternoon hours, then open their private practice for paying patients in the afternoons and evenings. Care was dependent on one's ability to pay.

The lack of fully trained nursing professionals prevented physicians from effectively administering primary care because they were spending undue amounts of time on basic nursing functions. For example, physicians would routinely perform triage, take vital signs, and prepare patient charts. Nurses, due to cultural norms, have not been integrated into the team practice of medicine–especially in primary care. This paradigm hinders a physician's ability to treat patients efficiently.



Primary Care Improvement Approach

While the former system focused on the central hospital centers found within the major urban areas of the country, the Ministry made a strategic decision to shift the focus from central hospitals to primary, community-based facilities. Dr. Craig Vanderwagen provided consultation and expertise to create a plan for a system in which care would be provided where the population resides, healthcare providers would be given more autonomy to make decisions for their patients, and training programs would be implemented to increase competencies throughout the primary healthcare sector.

Primary Care Accomplishments

The primary care improvement timeline depicts the key events, successes and accomplishments of the CPA and the Iraqi Ministry of Health team over the first year of freedom.

One of the priorities of the Ministry was to understand the state of their infrastructure–especially the many clinics that would be providing the bulk of the primary care to the population. During the year, over 240 hospitals and 1,200 preventive health clinics were assessed to determine their ability to provide services. Poorly maintained and poorly functioning facilities were targeted for renovation and maintenance.

This assessment allowed the Ministry to develop a comprehensive plan to improve their primary care infrastructure. The plan for 2004 is to construct, largely through U.S. funding, as many as 150 new primary healthcare centers following a comprehensive community-oriented primary care model (e.g., family practice principles, behavioral health, environmental health, community health/education).

The Ministry recognized the potential benefit of integrating the former Iraqi Army Medical professionals into the healthcare system. The Ministry developed a transition program and fully integrated 3,000 physicians and over 12,000 ancillary professionals into the Ministry of Health. The majority of physicians were assigned to rural areas to provide much needed support to the local population.

The Ministry team made significant changes to the financial system. Fees for primary care visits were set at 250 dinar (approximately 25 cents U.S.). The rates for all other healthcare requirements were reduced by 50% thus improving access to care.

The Ministry also initiated a number of training programs designed to quickly make a difference in the care provided–especially in under served areas.

Personal Dedication to the Task

In June 2004 the American Society for Clinical Pathology reported on the dedicated service of Captain David Kvamme, noting that "His average day begins at 5 am and ends at 10 pm. Friday the Muslim Holy Day, is only a 12-hour day: 6 am to 6 pm."

American Society for Clinical Pathology Member News, June 29, 2004

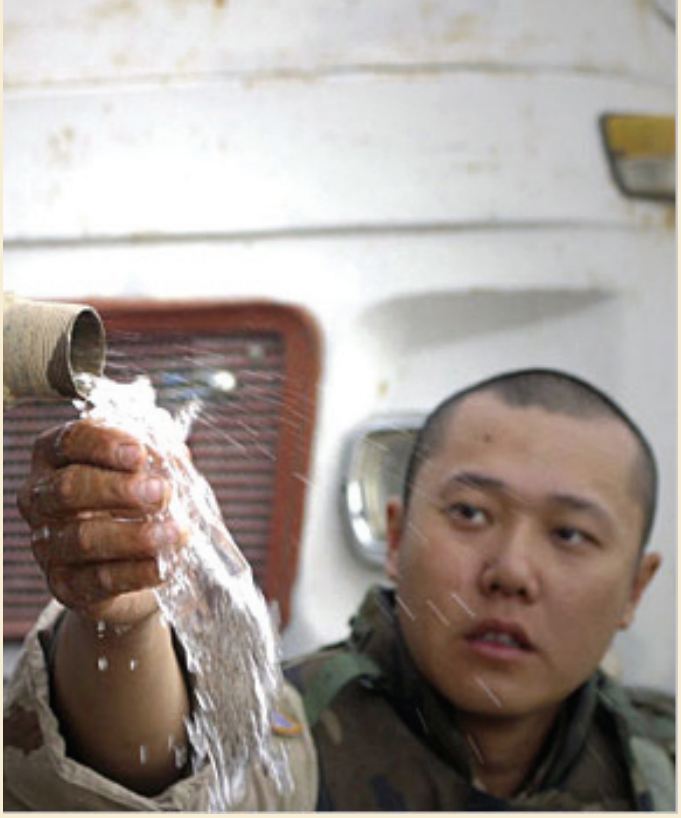
Humanitarian supplies from UAE arrive at the Mosul Airport

- Nurse training programs were implemented. One-week programs were set up to train nurses on core competencies. In addition, train-the-trainer programs were implemented. These programs trained a cadre of nurses on the core competencies and sent them out to the population to train their colleagues. This program has been highly successful
- Primary care providers were given training on recognition of acute malnutrition in children, diagnosis and treatment of tuberculosis, and other prevalent maladies
- Training and care provision programs were initiated for expectant mothers, and mothers with infant children
- International healthcare journals have been distributed and communications programs have been implemented to increase the knowledge and skill set of the primary care physicians

Healthcare Spending and Financing

During the last decade the Iraqi healthcare system's funding declined to an alarmingly low level. Estimates for system funding during the year 2002 set the mark at approximately $16 million, or 64 cents per Iraqi. There exists a statistical correlation between per capita total health spending and per capita gross domestic product. Using an estimated population for Iraq of 26 million and their pre-war GDP of $128 billion, one would have expected the Iraqi healthcare system budget to range between $960 million to $1.4 billion per year. The pre-war funding paucity exacerbated primary and secondary healthcare shortages, encouraged corruption, and placed the population's health at risk.[44]

The budget for 2004 is just over $1 billion or close to $38 per capita spending. In keeping with the decentralization philosophy, this budget reflects intensive spending in local programs. This spending focus on local needs continues to increase in the outyears. Less than 20% of the overall budget in 2004 is devoted to centralized Ministry activities. This amount is reduced to less than 10% in 2006.



Water is checked for purity by U.S. Army soldier in Kirkuk in Iraq on April 17

Ribbon Cutting Medical City ER

"Dr. Khudair Abbas and Maurizio Scelli (the Italian Red Cross High Commissioner) attended a ceremony held for the official opening of the 22-bed emergency room in the Baghdad Teaching Hospital in Medical City. A state-of-the-art Emergency Room upgraded and equipped thanks to a cooperative effort between the Ministry of Health and the Italian Red Cross that raised the money through a soccer match between the Italian Singers National Team and the Ferrari Team."

Iraq Ministry of Health Weekly Update, Vol. 46, April 26, 2004

Given the budget outlook, the Ministry of Health will quickly move toward the per capita rates associated with a robust healthcare system. The healthcare system over the next three years will undergo a radical transformation–from one that had been neglected, underfunded, and centrally managed, to a decentralized, adequately resourced, and managed system. Significant assistance was provided by Mr. John Walker in evaluating budget requriements and conducting planning for future spending and financing.

In addition to the internal Ministry of Health budget, the $793 million U.S. supplemental contribution to Iraq's health sector, and international grant contributions by healthcare and other relief organizations over the next three years will provide additional resources for system improvements.

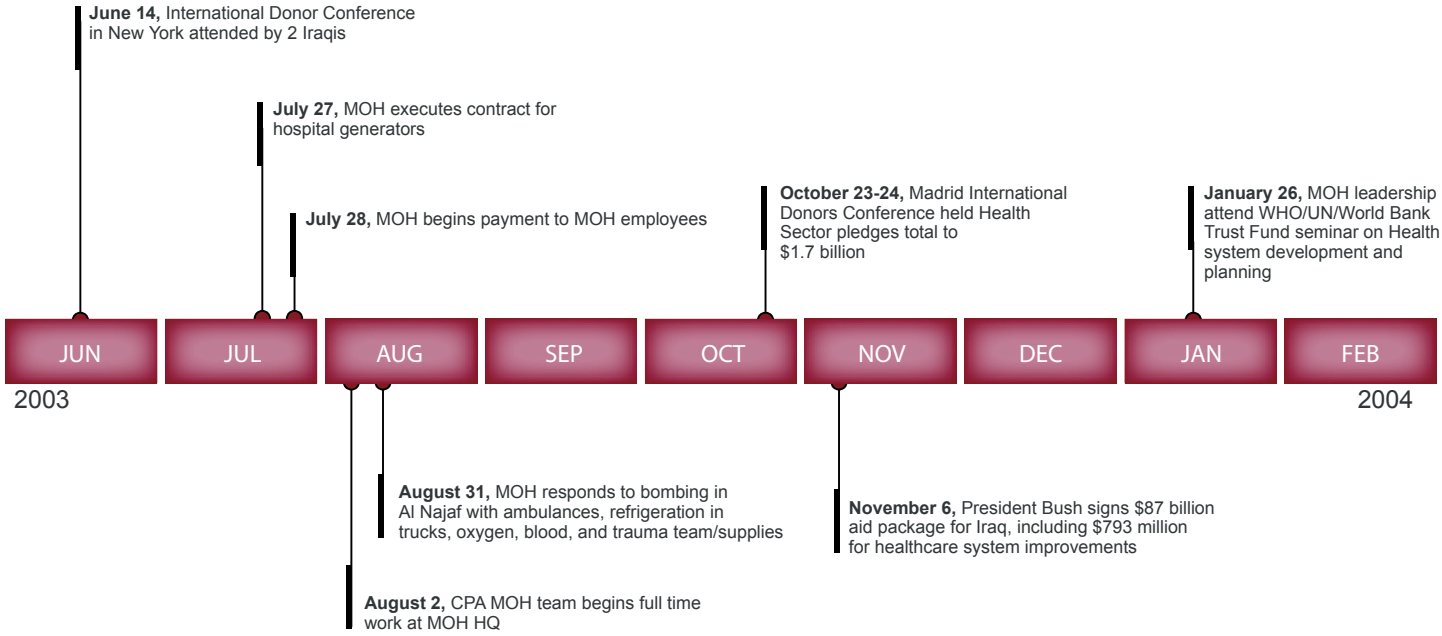
As discussed above, the Ministry of Health is adopting a shared financing system using co-payments to supplement locally funded financing. Co-payments are currently inexpensive and reflect the uncertainty of the evolving economy. One would expect co-payments and cost sharing to evolve with the overall economy of Iraq.

Coordination of International Support

To accomplish the reconstruction and rebuilding initiatives identified by the strategic working groups, another priority for the CPA-Ministry of Health team was to secure funding for the Ministry.

The first of several international donor conferences occurred in New York just weeks after the team arrived in Baghdad and was attended by two Iraqis. The Madrid Donors Conference held in October netted $1.7 billion in pledges of support. Much effort was put into preparing presentations to establish the business need for donations to the Ministry of Health.

Many in the international community actively supported the Ministry of Health before, during, and after the liberation and have continued their support as the Ministry rebuilds its healthcare system. Britain, Egypt, India, Italy, Japan, Jordan, the Netherlands, South Korea, Saudi Arabia, South Africa, Spain, Turkey, UAE and United States have provided assistance to the Ministry of Health over the last year. This international assistance has provided for healthcare training, facility construction, and ambulances.[45]



Examples of infrastructure improvements planned by the international community include:

- Al Eskan Pediatric Teaching Hospital Rehabilitation: The Spanish government recently signed a EURO€8.4 million agreement for renovations. The scope of work for this project includes new medical equipment for the facility as well as civil, electrical, and sanitary work along with basic rehabilitation work such as painting and structural repairs. Civil work will include a new roof; sanitary work will include overhaul of drainage systems for waste and pipe systems within the building, and sealing leaks in drainage and delivery pipes within the hospital
- Al Karama Teaching Hospital Rehabilitation: The Ministry signed an agreement with the Korea International Cooperation Agency (KOICA) donating U.S. $8 million for the rehabilitation of Al Karama Teaching Hospital in Baghdad. The agreement includes construction of a new operating theatre and emergency room at the hospital compound, new medical equipment and additional medical training through personnel exchanges between the two countries.

Once completed the rehabilitated teaching hospital will have the capacity to perform 25 operations per day and provide improved medical service to more than 900 outpatients daily

- Medical City Burn Unit/Emergency Room Rehabilitation: 30 Italian Red Cross personnel along with Iraqi doctors and nurses provide staffing for the Medical City burn ward
- Ali Al Gharbi Hospital Sanitation System: Working with the Coalition Provisional Authority, the aid group hired Iraqi contractors to dig a new septic system, lay pipes and refit the bathrooms with running water and electric lights. USAID fixed the 26-year-old hospital that had seen no Iraqi funding in the past decade for maintenance and repairs
- Al Majar Al Kabir Hospital Sanitation System: The Al Majar Al Kabir medical facility located in Southeastern Iraq near the border with Iran, serves about 800 outpatients each day and 70 inpatients, some of them undergoing major surgery. An Iraqi subcontractor was hired to excavate, lay pipes, and build new septic tanks outside the hospital compound. The U.S.-funded installation of a sanitary septic tank system ended years of filthy smells and wastes inside the medical facility

Lab technician enjoying her upgraded medical laboratory

"Mr. Minister, you know that the countries of the coalition are available and will remain available to help with advice and money. In the United States we have plans to give almost $800 million in healthcare assistance in the coming months. But now, as in the months and years to come, the decision to solicit help and advice from any source is yours."

L. Paul Bremer, Administrator, CPA

- Ibn Al-Qiff Spinal Cord Injury Hospital: A $524,500 grant from USAID for medical equipment and supplies will help return this facility to service, providing 125 bed inpatient capacity and an estimated 25,000 outpatient visits each year.

MOH Delegation Concludes Donor Coordination Visit to Japan

"Tokyo—Mr. Ammar al-Saffar, Deputy Minister of Health, and Dr. Adel Mosen, Director General for Inspection returned this week from a productive meeting with the Japanese officials regarding that country's allocation of aid to the healthcare of the Iraqi people. Accompanied by Commander David Tarantino, CPA-MOH advisor for donor-coordination, the delegation met with Yoriko Kawaguchi, Japan's Minister of Foreign Affairs and representatives from the Japan International Cooperation Agency (JICA). The delegation focused on establishing lines of communication and facilitation coordination of Japan's substantial pledge of assistance to rehabilitate segments of the Iraqi healthcare system. The groups identified Hospico as the key contact to help coordinate and assess projects within Iraq for the government of Japan."

Iraq Ministry of Health Weekly Update, Vol. 38, February 25, 2004

"For one Iraqi, the Community Action Program—implemented by USAID partner CHF International in coordination with the Ministry of Health—was quite emotional. The program set forth to assist select communities based on the severity of their needs. A key tenet of the program was the involvement of local Iraqis. Elected members of the community were responsible for representing the priorities of their neighborhoods. To the people of Najaf, the rehabilitation of the Al Nasir Primary Healthcare Center was a top priority. The Al Nasir health center, located in the predominantly Shi'ite city of Najaf, suffered from years of neglect and discriminatory resource allocation by the former regime. For Mr. Ali Rahim, this the re-equipping of this primary health center hit close to home. Mr. Rahim, like many Iraqis, lost a loved one due to the insufficient medical equipment at the Al Nasir health center. Living approximately 300 yards away from the health center, Mr. Rahim brought his son to the center after his son suffered from only moderate burns to his body. Due to lack of equipment, his son was turned away. A day later, the three-year-old boy died. As an elected member of the local panel, Mr. Rahim now has a chance to change the fate of his community. He feels obligated, to his family and to his community, "to make the initiative a success." This USAID project will benefit approximately 50,000 residents."

USAID Iraq Daily Update,
April 7, 2004

Dr. William Winkenwerder and Dr. Ala'adin Alwan

The Years Ahead: Actions and Priorities

Iraq continues to occupy the world's stage as a country facing many post-war challenges. Basic services of a modern society (i.e., water, sewer, and electrical service) are slowly recovering. Many of the international aid organizations mentioned throughout this report (e.g., the Iraqi Red Crescent, the ICRC, the World Bank, the World Health Organization, USAID, CARE, UNICEF) are still providing humanitarian support and relief in Iraq. They are there, rebuilding this country of 26 million people, restoring basic services and helping to improve the quality of life for Iraqi citizens.

Palm tree set against the brilliant blue Iraqi sky

Through the hard work, bravery, and perseverance of these organizations, the staff of the interim government, the CPA, and the international community, the Iraqi Ministry of Health has charted a roadmap to ensure short-term, mid-term and long-term recovery. This collaborative team has already undertaken and accomplished immediate actions that have set the recovery on a sustainable foundation. These initial steps have met the most pressing needs while at the same time elevating emerging priorities to the forefront. Maintaining the course that has been charted will require continued bravery, perseverance, collaboration, ingenuity, creativity, and international support.

The CPA, like the DART, ORHA, and Civil Affairs teams who preceded them, has now disbanded–their tour of duty completed. These teams have, as this report has indicated, much to show for their year in the country. They have much to be proud of, perhaps most importantly leaving a legacy of wisdom, courage, and hope for the Ministry of Health and for all the Iraqi people.

When Saddam Hussein was in power, healthcare spending declined to as little as 64 cents per capita. Based on the 2004 Ministry of Health budget, per capita spending is approximately $38 U.S. dollars. This infusion of funding into the Ministry of Health's budget marks a dramatic change from the former regime. But, it is not just the infusion of funding that is dramatic, it is also the fair distribution and equitable allocation of resources across the country that is different and new. Prior to 2003, money and power was centralized in Baghdad and most of the spending occurred there and for those loyal to the regime. Due to the generosity of the international community, which like a floodgate, was opened after the war, many rebuilding efforts are underway or are planned, including the building of as many as 150 new primary healthcare centers. Initial resource funding efforts have focused on infrastructure stability and transitioning to a primary care model.

Over the past year, the atmosphere and the work environment has changed too. Physically, the Ministry of Health is working from a newly refurbished building, with state-of-the-practice equipment and supplies. Emotionally, fear and risk aversion are no longer as prevalent as they were when the team arrived.

"As Ministries have become increasingly well-organized and staffed, the Coalition wants to give them full authority over their ministries. In deciding when a ministry is ready for full authority, the Coalition considered four questions…

1. **Does the ministry have short and long-term strategies?**
2. **Does the ministry structure and staffing support the goals?**
3. **Thirdly, have training needs been analyzed and training programs begun?**
4. **And, finally, are fundamental management systems such as communications, personnel policies, financial, and budgetary controls in place?**

Clearly, here at the Ministry of Health, the answer to all of these questions is a resounding (yes)."

L. Paul Bremer, Administrator CPA, March 27, 2004

HHS Secretary Tommy Thompson and Dr. Abbas at a celebration for the MOH

These reactionary instincts have been replaced by proactive engagement and open communications. Physicians are now free to confer with their colleagues on cases and are enjoying the intellectual exchange. Access to the latest medical knowledge is flowing again. The employees of the Ministry of Health have been empowered over the past year to voice opinions, make decisions, and to solve problems.

Rebuilding the healthcare system from the ground up, the Iraqis, working for the Ministry of Health, have defined and are working to establish mechanisms to monitor a set of healthcare goals. Life-enhancing short-term goals have been set, such as targets for immunization rates and improving infant mortality and morbidity. Longer-term goals such as meeting international standards for healthcare spending, quality, access, and care are also being established and tracked. Moving the system to a primary care model will take time, as will change in cultural attitudes and social behaviors to improve health delivery outcomes.

Lessons Learned

The past year has been one characterized by achievement in the face of instability and insecurity. The simple act of going to work was a challenge and demanded great courage. The CPA's Senior Advisory Team to the Ministry of Health achieved successes exceeding expectations. They coordinated efforts to address immediate healthcare needs to avoid epidemics, they empowered the staff of the Iraqi Ministry to create a vision for a viable and sustainable healthcare system, they acted as mentors and facilitators to the staff to develop skills necessary to manage this system, and they created a trusting network of international relationships that will serve as a support infrastructure to the Ministry of Health as it matures in its independence over time.

The experiences of this international advisory team point to a number of lessons learned that could be beneficial and valuable to others facing similar challenges in the future. Some of the lessons learned represent areas where the team did just the right thing and others represent areas where, with the benefit of hindsight, the team would have changed their approach to enhance success.

Ministry of Health Building

Key take-away lessons are described below.

1. **Leaving the Green Zone.** Mr. Haveman made a decision that the CPA's Ministry of Health advisory team would leave the Green Zone and conduct their day-to-day work at the Ministry's headquarters in Baghdad. This decision was a critical success factor for this project. This single decision enhanced the relationship between the CPA advisory team and the Iraqi Ministry of Health staff, ensuring open communication, creating trust, and streamlining coordination of activities. It included regular travel throughout Iraq to Governorates, hospitals, clinics, laboratories and warehouses. But even more important than this, the very act of leaving the Green Zone took courage and commitment on the part of the international advisors. This courage was visible to the Iraqi staff and instilled in them the confidence and courage to do likewise. Staffed with their Iraqi personnel, as well as the CPA advisors, the result was that the Ministry of Health was the first Ministry to be transitioned to Iraqi control in March 2004.

2. **Immediate Planning: "The Transition from War to Reconstruction"**. The formulation of the CPA healthcare advisory team in less than one month was remarkable. The speed with which this team was formed was even more remarkable given the changing nature of the situation on the ground in Iraq. Initially, the international community anticipated a healthcare disaster and planned accordingly for the use of disaster medicine experts. The effectiveness of these teams (the DART, Civil Affairs and ORHA teams) along with prepositioned NGO resources, were successful in preventing any major healthcare disaster. Therefore the CPA was able to focus their efforts on the need to plan and restore a healthcare system that had been neglected and left to decay for years. The success of the CPA advisory team in such a short period of time makes it a valuable model for creation of standardized frameworks for establishing healthcare systems in post-conflict arenas. These "frameworks" would not include details of what to do and how to do it, as it is clear that such decisions would depend entirely on the uniqueness of any given situation. However, the frameworks would identify a sample organizational structure and would define roles and specific associated responsibilities within that structure.

Dr. Harvey Fineberg, Dr. Naeema Al-Gasseer, Dr. David Smith, Mr. Gordon West, Dr. David Tornberg, and Dr. Jean-Jacques Frere present to the Symposium on Reconstructing the Healthcare System in Iraq on August 11, 2004

Thus, the user could treat the framework as a menu from which to select those elements that apply to the given situation. Such a framework would also include a menu of sample objectives that might be appropriate to a given situation. Each sample objective would identify associated processes, tools, metrics, and measures that might be useful to the team.

The evolutionary nature of the situation in Iraq demonstrates that one framework would not apply to all situations. On the contrary, it appears that three "basic" frameworks are necessary, as follows:

- A disaster/refugee care framework (which already exists in the form of the USAID Field Operations Guide for Disaster Assessments and Response)
- Where no viable healthcare system exists, a framework for a new, start-up healthcare system from the ground up
- A framework to repair an existing healthcare system that is in disrepair due to damage or neglect

3. Increase Access to Qualified Translators. Throughout the last year, and continuing even today, is the need for qualified translators to ensure timely and accurate communication between teammates and between the international team and the local citizenry. As described above, one of the key factors defining the success of this effort was the inclusiveness of the team and their consistent interaction with the people of Iraq. Had they increased numbers of translators, one can only imagine the impact that this team might have had and the barriers they could have broken through.

Dr. Abbas discusses the healthcare challenges with an intent young woman at the Symposium on Reconstructing the Healthcare System in Iraq on August 11, 2004

4. Early Implementation of Management Skills Training. The CPA team focused heavily on providing training and education to the Ministry of Health staff. However, the original and primary focus was on training to bring the healthcare skills and knowledge up to par with the international community. Over time, it became clear that in addition to having been starved for the latest in medical skills and technologies, the Ministry of Health team had also received little or no training to address basic management skills. Skills in areas such as staff management, team collaboration, integrated planning, purchasing, and supply management were seriously hampering progress. In retrospect, the CPA team recognizes that earlier focus on these types of skills would have benefited the effort. In any future endeavors where isolation has been prevalent for a long period, this is an area that should be given early attention.

5. Rear Echelon Support Structure. The integration of both Iraq on-the-ground and rear echelon teams was highly effective in maintaining momentum, maintaining focus, and ultimately achieving success for the team. The U.S. based teams included representatives from the Armed Forces Medical Intelligence Center, USAID, HHS, Department of State, and DoD/Health Affairs. DoD's U.S.-based team was led by Dr. Winkenwerder, with significant contributions of his Deputy, Dr. Tornberg, along with Captain Jack Smith, MC, USN. These teams conducted multiple routine teleconferences between the Iraq-based team and the executive leadership in the U.S. This provided a forum for direct and open communications, for real-time understanding of issues facing the team, and especially, for immediate high-level attention to the needs of the Iraq-based team. When specialized expertise was required, the leadership could address this quickly–often times reaching across departments to ensure that the right resource was tapped. When detailed research was required, the leadership had the authority to make resources available immediately to meet the needs. Above all, the participation of all parties was routine and predictable. The team on-the-ground in Iraq knew they could count on the meetings and the high level support they offered.

Iraqi girls charm the American photographer

6. Application of an Inclusive and Empowering Process. Allowing the business process empowering model that focused on inclusion of a highly diverse team and constant engagement of the Iraqi people to shape the team's work was essential to the success of this effort. This model was not "designed" in advance, but resulted from a fast-paced evolutionary process and the leadership and makeup of the team. The model and the nine characteristics attributed to it, was central to the accomplishments of the team. It reflected the attitude of Mr. Jim Haveman, the Senior Advisor, as well as the senior leadership in the Department of Defense. Dr. Winkenwerder initially promulgated this philosophy when he began to build the team. Not only did he pull experts including Dr. Tornberg, Ms. Diana Tabler, Colonel Dave Adams, Commander Gene Delara, and Captain Smith from his own staff, but he reached across organizational lines and sought the contributions of Secretary Thompson at the Department of Health and Human Services. Next, the team reached out to international participants as well as Non-Governmental Organizations. This model of inclusiveness ensured that the contributions of each individual and organization were respected and valued.

This model of inclusion extended to the "rear support team" located in the U.S. The team maintained routine contact with the U.S.-based senior leadership, utilizing their expertise on an ongoing basis. Finally, and perhaps most importantly, the CPA/MOH team actively sought constant input from, and involvement of, the Iraqi people. This engagement with the population created trust, encouraged participation, and speeded the coalescence of the "team" in spite of its highly diverse composition. This process model is viewed as one of the central elements contributing to the success of the healthcare effort, and should be reconstructed when similar situations arise in the future.

A young Iraqi boy at the MOH daycare center

Next Steps

It is always difficult to start a task and leave it before it is finished. Even knowing that their assignment was temporary, it was hard for the CPA-Ministry of Health team to leave before everything that had been set in motion took hold. In interviews with CPA team members, the pride in, excitement about, and hope for the next steps was uniformly expressed. As this account is entitled "The Road to Recovery," this last section presents a roadmap of actions and priorities that the Iraqi team has identified and is working diligently everyday to accomplish. Some will take years to accomplish, as they are part of the long-term plan while others will be in place by year's end. Virtually all of these represent implementation of strategic plans that have been derived from the strategic vision, which evolved over the last year. From around the world, the CPA senior advisory team is watching and supporting this courageous effort.

Public Health

- Continue to implement the master plan to reduce child mortality and increase the level of preventive care available to the Iraqi people through international assistance
- Continue to design and develop a national, computer-based evidentiary disease surveillance system to determine resource patterns and needs
- Establish a reliable system to track and assess manpower distribution based on population need
- Integrate the existing health provider services into a comprehensive, three phased Maternal and Child Healthcare program with qualified, experienced, and licensed medical and allied health personnel
- Develop professional training and public education initiatives to help change cultural attitudes, social behaviors, and improve health delivery outcomes. In the near term, special attention should be focused on training and education to enhance both the number and skills of the nurses

Aerial View of Baghdad

Pharmaceutical, Medical Supplies, and Equipment

- Redouble security and infrastructure stabilization steps to stabilize pharmaceuticals and medical supplies prices and to keep corruption at bay
- Provide resource management and procurement procedure training for mid-level staff
- Provide training and recruitment of healthcare administration professionals
- Analyze and determine structural requirements to successfully privatize Kimadia. This analysis should include an assessment of necessary regulatory institutions and market enablers needed to encourage private participation in this critical sector
- Establish private sector (or at minimum public-private partnership) retail pharmacies, pharmaceutical companies, medical equipment sales/support, medical oxygen generation and sales
- Establish effective regulatory guidance and controls to govern the pharmaceutical industry
- Implement overall logistics and procurement reform to include upgraded warehousing systems and inventory management systems that support the decentralized management approach
- Establish regulatory guidance, accounting, auditing, billing, and inventory controls of all related financial transactions associated with the Ministry

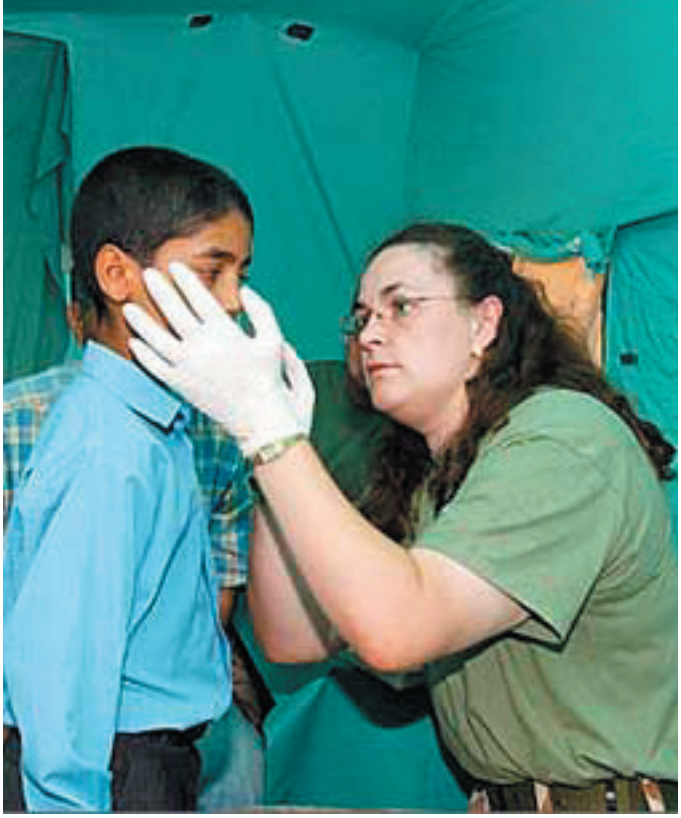
Dr. Alwan addressing the audience at the Institute of Medicine Symposium

Professional Training and Development

- Collaborate with other ministries to provide standardized training in business, finance, program management, and administration
- Create training and education programs to encourage expansion of career paths for all ancillary healthcare professionals
- Seek grants and fellowships for international training and collaboration
- Create standards for continuing education for all healthcare providers
- Create a public education campaign to enhance preventive medicine and to help modify unhealthy cultural and social behaviors
- Develop performance standards and measures tied to international protocols

Primary Care

- Continue to focus on the primary healthcare model, which will include most of the ambulatory services needed by the local population (wellness and preventive care, maternal and child health services, school health programs, management of chronic conditions, urgent care for minor trauma cases, and a mature referral program). The primary healthcare model will be strengthened by retraining providers to enhance basic clinical skills, use of appropriate drugs, and creation and implementation of clinical practice guidelines
- Continue transitioning to a decentralized model for both the provision of care as well as for the decision making process for patients
- Institute patient referral systems
- Institute national health accounts
- Increase accessibility to healthcare regardless of geographies, ethnicity, gender, and political/religious affiliation. This includes construction of new facilities and maintenance/upgrades of existing facilities



An Iraqi boy receives medical care

- Increase availability of ancillary care support, including private laboratories, diagnostic centers, medical logistics system management, health information systems, and human resources support
- Establish home healthcare programs, hospice, community mental health programs, personnel staffing agencies, housekeeping management, supplies, and services

Information Technology

- Identify and evaluate strategic programs for integration of information technology solutions including wireless technology in the Ministry of Health
- Identify and evaluate principles and standards for collecting and evaluating health information to support clinical and financial decision-making, including development of a vital and health statistics department within the Ministry of Health
- Establish a centralized and standardized computerized medical record program

International Support

- Leverage the strong, positive relationships built during this past year to continue training, intellectual interchange, and financial support from the international community
- Establish and maintain an office of donor coordination to track donations, pair complimentary donations, and schedule donations

Planning for Iraq's healthcare activities began long before the 2003 liberation had even begun. The Humanitarian Planning Team led the way in this healthcare mission and their work resulted in deployment of the USAID DART along with specialized Civil Affairs teams. The DART and Civil Affairs teams leveraged resources put in place by numerous international NGOs. Soon these teams were replaced by ORHA, who paved the way for the international CPA team. The success of the CPA Health Team in conjunction with Dr. Khudair Abbas and his Iraqi staff, resulted in the Iraqi people taking full responsibility for their own Ministry of Health, under the leadership of Dr. Ala'adin Alwan.

Finally, as the Iraqi Interim Government took its full authority, the CPA Team's advisory role to the Ministry of Health was transitioned to the more traditional and bilateral relationship between the Government and the U.S. Embassy in Iraq.

The unprecedented success of Iraq's new Ministry of Health is due wholly to the courageous and dedicated efforts of the Iraqi people who worked hand-in-hand with these many teams from around the world. Many of these dedicated individuals are named in this report. There are equally as many names not mentioned, and many not known. The efforts, courage, and selflessness of these heroes were absolutely vital to making this story one not only of hope, but of success.

Appendices

Appendices

Appendix A: CPA Health Team Supporting the Iraq Ministry of Health

Adams, David	Col.	U.S. Air Force
Al Tikriti, Mowafag		Civilian
Anderson, Dee	LTC	U.S. Army
Anderson, Warner	COL	U.S. Army
Backes, Ken	Lt. Col.	U.S. Air Force
Bechtyr, Goran		Civilian
Bennett, David	Lt. Col.	U.S. Air Force
Black, John	COL	U.S. Army
Bowersox, Jon	Lt. Col.	U.S. Air Force
Bretzke, David		Civilian
Briski, Ted	CDR	U.S. Navy
Charleston, Carlin	Lt. Col.	U.S. Marine Corps
Cote, Elizabeth		Civilian
Davidson, Ross	CPT	U.S. Army
Delara, Gene	CDR	U.S. Navy
Diaz, Raul	LTC	U.S. Army
Dobson, Charles		Civilian
Donovan, Robert	MAJ	U.S. Army
Evans, Pamela	MAJ	U.S. Army
Fairchild, Gary	Lt. Col.	U.S. Air Force
Fikes, James	LTC	U.S. Army
Fisher, Charles	LTC	U.S. Army
Frame, Robert	COL	U.S. Army
Gerber, Fred	COL	U.S. Army
Goodwin, Bob		Civilian
Guszcza, George	CPT	U.S. Army
Hakki, Said		Civilian
Hanlon, James	MAJ	U.S. Army
Haveman, Jim		Civilian
Hesslgesser, Dan	CDR	U.S. Public Health Service
Howe, John	MAJ	U.S. Army
Jahns, Frank	COL	U.S. Army
Kerr, Brian	CDR	
Kvamme, David	CAPT	U.S. Public Health Service
Lang, Jason	SGT	U.S. Army
Martin, Mary	LTC	
Mattera, Shay	SGT	U.S. Army
McDaniels, Roger	MAJ	U.S. Army
McGovern, Mike		Civilian
McHale, Linda	Col.	U.S. Air Force
Mendez, Marcos	LTC	U.S. Army
Mozzachio, Alicia	LCDR	
Nimmer, Elias	COL	U.S. Army
Niska, Richard	CAPT	U.S. Public Health Service

Olson, Bonnie	SPC	U.S. Army
Olson, Mike	LTC	U.S. Army
Phillips, Ralph	SFC	U.S. Army
Prouse, Anna		Civilian
Rietveld, Kees		Civilian
Sforzi, Mauricio		Civilian
Simpson, Diane	COL	U.S. Army
Smith, John	MAJ	U.S. Army
Smith, Michael	MAJ	U.S. Army
Stevens, Sean	CPT	U.S. Army
Svabek, Scott	LTC	U.S. Army
Tabler, Diana		Civilian
Tarantino, David	CDR	U.S. Navy
Thamer, Mahmood		Civilian
Trenolone, Anne		Civilian
Vanderwagen, Craig	RADM	U.S. Public Health Service
Wahler, Kristie	SGT	U.S. Army
Walker, John		Civilian
Walrath, Brian	CPT	U.S. Army
Zajac, David	CPT	U.S. Army

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Appendix C: List of Individuals Interviewed for this Report

Adams, Dave, Col	U.S. Air Force, U.S. Team
Abbas, Khudeir, Dr.	Interim Minister of Health, Iraq
Al-Attar, Dr.	Diplomate of the American Board of Internal Medicine
Alwan, Ala'adin, Dr.	Minister of Health, Iraq
Anderson, Warner (Butch), COL	U.S. Army, U.S. Team
Bennett, David, LTC	U.S. Air Force, U.S. Team
Brinkley, Jeffrey	Health Attache', U.S. Embassy
Briski, Ted, CDR	U.S. Navy, U.S. Team
Browning, Steven, Mr.	U.S. Civilian
Charleston, Carlen, LTC	U.S. Army
Delara, Gene, CDR	U.S. Navy, U.S. Team
Evans, Pamela, MAJ	U.S. Army Team
Fisher, Charles, LTC	U.S. Army
Frame, Robert, COL	U.S. Army Team
Gerber, Fred, COL	U.S. Army, U.S. Team
Goodwin, Robert, Mr.	U.S. Civilian, CENTCOM
Guszcza, George, CPT	U.S. Army Team
Haveman, James K, Mr.	U.S. Civilian
Hesslgesser, Dan, CDR	U.S. Navy
Jones, Walter, RN	U.S, Civilian, Coordinator, Center for International Emergency, Disaster, and Refugee Studies
Kvamme, David, Capt.	HHS, USPHS
Nimmer, Elias, COL	U.S. Army
Olson, John Michael, LTC	U.S. Army
Remund, Dan, COL	U.S. Army
Rostow, Victor, Mr.	U.S. Civilian
Simpson, Dianne, COL	HHS Civilian and U.S. Army Reserves
Smith, Jack, CAPT	U.S. Navy, U.S. Team
Smith, Michael MAJ	U.S. Army
Stevens, Shaun, CPT	U.S. Army
Svabek, Scott, LTC	U.S. Army
Tabler, Diana, Ms.	U.S. Civilian
Tarantino, Dave, CDR	U.S. Navy, CENTCOM
Thamer, Mahmood, Dr.	Iraqi Civilian
Trenolone, Anne, Ms.	Civilian, U.S. Team
Vanderwagen, Craig RADM	HHS, USPHS
Yacoub, E., Dr.	Eqyptian Medical Doctor, practicing in Iraq in late 1960s
Yacoub, Oraib, Dr.	Iraqi Medical Doctor, practicing in Iraq in late 1960s
Zajac, David, CPT	U.S. Army, U.S. Team

In addition to the individuals listed above, a number of Iraqi civilians were interviewed for the commentary. These individuals provided extremely valuable insights and perspectives.

Appendix D: Endnotes

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Appendix E: List of Participants in the Bi-Weekly Interagency Teleconferences

Ando, Yumi Dr.	DoS
Aramati, Mickey, Ms.	USAID
Bell, James, Mr.	USAID
Bell, Michelle, MAJ	AFMIC
Benge, Mike, COL	DoD
Bishop, Perry, Mr.	DoD
Blair, Robert, Mr.	DoS
Clements, Andrew, Mr.	USAID
Coury, Jane, Ms.	HHS
Dajani, Dina, Ms.	HHS
Daley, Rebecca, Ms.	DoS
Diggs, Carter, Mr.	USAID
Dittmeier, Elizabeth, Ms.	DoD
Gramaglia, Tom, Mr.	DoS
Green, N.W., Mr.	DoS
Hanson, Kevin, CAPT	AFMIC
Hendrick, Byron, CDR	AFMIC
James, Howard, Mr.	AFMIC
Jansen, Bill, Dr.	USAID
Kendall, Larry, CPO	AFMIC
Kinty, Sheila, Dr.	AFMIC
Molik, Peter, MAJ	AFMIC
Ostfield, Marc, Mr.	DoS
Porr, Darrel, MGEN	DoD
Powers, John, COL	DoD
Reinhardt, Brenda, LTC	AFMIC
Smith, Jack, CAPT	DoD
Smith, David, Dr.	HHS
Sulka, Dan, COL	DoD
Thompson, Catherine, Ms.	USAID
Tornberg, David, DASD (C&PP)	DoD
Walkup, Ruth, Dr.	HHS
Winkenwerder, William, ASD (HA)	DoD

Appendix F: Reconstructing the Healthcare System in Iraq: Lessons Learned and Future Prospects

A Symposium Co-Sponsored by the Institute of Medicine and the Assistant Secretary of Defense (Health Affairs), August 11, 2004

Efforts to reconstruct the Iraqi healthcare system over the past 15 months have involved both enormous challenges and significant achievements. Relief and rehabilitation work had to be coordinated across an extremely broad range of Iraqi, multinational, and foreign governmental and non-governmental organizations, as well as several different administrative regimes within Iraq. For many of these organizations, the reconstruction effort was unprecedented in its size and complexity, even apart from challenges posed by the difficult security environment in which operations were carried out. Nevertheless, substantial progress has been made toward stabilizing the country's immediate health situation, addressing the most urgent relief and rehabilitation needs, and beginning to move forward on a long-term strategy for restoring the healthcare system to the position of strength it once occupied.

In the interests of evaluating the success of reconstruction efforts to date and considering what might be done to promote further progress, the Assistant Secretary of Defense for Health Affairs and the Institute of Medicine convened a symposium bringing together representatives of Iraq's Ministry of Health and the major organizations pursuing health-related agendas in Iraq. It was hoped that the symposium would help outside organizations coordinate their efforts and align their work in support of the priorities advanced by the Ministry of Health. In addition, this venue provided an opportunity for Iraq's current Minister of Health, Dr. Ala'adin Alwan, to outline and receive feedback concerning the Ministry's four-year strategic plan for rehabilitating the healthcare system. The symposium took place within the context of significant transitions both in Iraq and in the United States. In Iraq, the Coalition Provisional Authority (CPA) was dissolved on June 28th, 2004, as Iraqi self-rule was returned to a new interim government. Contemporaneous with this transition, there has been a shifting of responsibilities from the Department of Defense (DoD) to the Department of State in managing U.S. affairs within Iraq (via the reconstituted American embassy in Baghdad). These transitions mark the early stages of the rehabilitation of the nation's healthcare system within the framework of a new constitutional government.

Experiences of the Past Year–Department of Defense and Coalition Provisional Authority

Initial leadership for health-related matters in post-conflict Iraq fell to the office of the Assistant Secretary of Defense for Health Affairs, with support from the Army Surgeon General and with close cooperation by other U.S. agencies, including the Department of Health and Human Services (HHS) and USAID, as well as support by international partners. Together, they sought to assemble a multidisciplinary advisory team that would be assigned to Iraq's Ministry of Health. Jim Haveman, formerly head of the Michigan Department of Community Health, was chosen to lead this team and served as the CPA's senior advisor to the Ministry of Health. The team, comprised of 30 representatives from a wide range of health-related disciplines, was deployed to Iraq in June 2003 and assigned to the CPA. Over the next year, more than 80 individuals would serve on this CPA team, which suffered 3 fatalities and was awarded 8 Purple Hearts among its members.

One of the team's most immediate tasks upon arriving in Iraq was to determine whether there appeared to be any imminent public health crises stemming from the disruptions of the recent conflict. They determined that relief efforts by health teams from coalition military forces and international organizations, together with a very active response from Iraqi health professionals, had largely succeeded in stabilizing health conditions and allaying fears of major disease outbreaks or other imminent calamities. From there, the team moved rapidly toward assessing urgent needs in different areas of the country and drawing up preliminary strategic plans for rebuilding and rehabilitating the healthcare system as a whole.

As will be described in more detail below, the situation that the CPA team encountered on the ground was daunting. Years of neglect in the healthcare sector had left a decaying physical infrastructure, acute shortages of medical equipment and supplies, and medical personnel who had been largely cut off from the outside world for a decade or more and lacked both the numbers and the training to adequately meet the population's needs.

The Ministry of Health's headquarters in Baghdad had been completely looted in the chaos that followed the collapse of the former regime, and Ministry staff had been working for several months without pay at the time when the CPA team arrived. In addition, there were more intangible legacies of the authoritarian past, such as the lack of a history of open communication across different management sectors and geographic regions, deeply rooted corruption in certain sectors such as the pharmaceutical procurement and distribution system, and geographic biases in the distribution of healthcare services that reflect the system of political rewards and punishments employed by the old regime.

In working to address the complex problems affecting so many areas simultaneously, the CPA team strove to maintain a "big tent" strategy with respect to the numerous different actors and stakeholders involved in rehabilitating the Iraqi healthcare sector. Representatives of the different agencies and multinational organizations in Iraq met or teleconferenced frequently under CPA auspices in order to coordinate their activities with each other and with the Ministry of Health. The CPA team also sought to maintain its mobility and visibility around the country as much as possible within security constraints, hiring its own protection service and vehicles to ensure greater freedom to travel to different healthcare sites. Outside the country, the CPA and representatives of affiliated agencies relied on a deep well of support staff who could be called on via regular teleconferences and other means of communication. Within the U.S., different agencies that did not always have a prior history of close working relationships—including DoD, USAID, the State Department, and numerous branches of HHS—collaborated with each other in arrangements that paralleled those of their counterpart representatives in Iraq. It was this breadth and depth of available skills that speakers from DoD and CPA felt was absolutely critical to the success of their operations.

Experiences of the Past Year–Iraqi Ministry of Health

In August 2003, Dr. Khudair Abbas was named the country's new interim Minister of Health, having returned to Iraq after many years of exile and having worked with colleagues to found a new health center in al-Sadr City earlier that summer. The system he inherited, although once one of the most advanced healthcare systems in the Middle East, had been ravaged by more than two decades of wars, severe mismanagement, and economic sanctions (including the former regime's political manipulation of these sanctions). Over the previous ten years in particular, government spending on healthcare had declined precipitously, while infant and child mortality rates nearly doubled. Hospital capacity also dropped sharply, medical equipment fell into disuse from lack of funds for repair and replacement, and a similar level of deterioration in the country's water and sanitation systems contributed to the rising burden of communicable diseases. The widespread looting of April 2003 further exacerbated these problems, as 15 percent of the country's primary health centers were looted and 7 percent of them completely destroyed.

Systematic assessments of healthcare indicators and clinical capacity around the country were initiated in the early months of the CPA and continued in cooperation with Ministry of Health officials. Of the country's roughly 220 hospitals, 65 are private hospitals that started coming into existence in the early 1990s as public facilities fell into increasingly debilitated conditions. In these institutions, overall bed occupancy rates had declined to an average of just over 50 percent. Among primary health centers, it was estimated that only two-thirds of them were staffed by doctors, while the rest were led by staff with less advanced certifications. Nationwide, the ratio of nurses to doctors is around 2:1, a quite low proportion in comparison with other countries in the region. Moreover, very few Iraqi nurses have college degrees, and a large percentage of these serve primarily in administrative capacities rather than caring directly for patients or working as technicians. For this reason, strengthening the nursing sector was quickly identified as a major priority for the Ministry. Other priorities from the first year have included beginning repairs at primary care centers and hospitals, reorganizing the pharmaceutical system, establishing an Inspector General and other administrative measures for eliminating corruption, and setting up a facilities protection service to provide security at hospitals and primary care centers around the country.

One of the Ministry of Health's biggest challenges in the early months was simply trying to coordinate the activities of the enormous number of different organizations working in Iraq. Between U.N. agencies, U.S. agencies, and a very large range of NGOs, it was a difficult task to ensure that their activities meshed together smoothly, did not unnecessarily duplicate each other's efforts, and were consistent with the Ministry's overall strategies. Broader strategic goals were also something that needed to be mapped out as rapidly as possible in order to provide direction for the varied rehabilitation efforts taking place. Groundwork in this area had already been initiated beginning in August 2003 by CPA officials, representatives of the WHO and other U.N. agencies, and a number of international partners, as well as key staff members of the Iraq Ministry of Health. Additional advice came from representatives of the different governorates in Iraq. The work that went into this strategic plan also helped Ministry officials prepare for the Madrid donors summit, where substantial amounts of aid were pledged for health and education purposes. With planning and implementation moving forward at a rapid pace, the Ministry of Health became the first ministry to be turned over to full Iraqi control by the CPA in the spring of 2004, and Dr. Ala'adin Alwan was appointed the new Minister of Health in June.

Experiences of the Past Year–Inter-Agency Coordination

In anticipation of a possible conflict in Iraq, USAID began to put together focus groups in the autumn of 2002 to discuss the consequences and reconstruction needs that might arise from such a conflict. These groups analyzed potential adverse health outcomes ranging from food shortages to disease outbreaks and outlined intervention strategies that could be used to address any such events. Beginning in March and April of 2003, contracts for healthcare assistance were put into place with organizations including UNICEF, WHO, and Abt Associates (who became the principal delivery mechanism for USAID's participation in the reconstruction of Iraq's healthcare sector). Immunization and nutrition were priority areas during the earliest relief efforts, with programs especially targeting women and young children. Working through the CPA and the Iraqi Ministry of Health, USAID contracts funded programs that vaccinated over 3 million children under the age of 5, as well as 700,000 pregnant women.

Iron folate supplements and high protein biscuits were distributed to women of childbearing age and children or mothers deemed at risk of malnutrition. A second major priority area was the delivery of potable water and the repair of water and sanitation networks in different areas of the country. Finally, USAID also supported healthcare training programs, including training of individuals for the task of subsequently training others, with a particular emphasis on skills in primary healthcare. Many of these reconstruction and training programs are continuing.

As the lead U.S. agency for areas of national health policy ranging from drug safety to public health initiatives, HHS was able to offer expertise, personnel, and other means of technical support in a wide variety of areas. Staff members from the Centers for Disease Control and Prevention (CDC) have assisted the Ministry of Health in developing a national disease surveillance system, which will be essential for providing an evidence base on which to plan and implement new health initiatives. Representatives from the Food and Drug Administration (FDA) have supported work in the Iraqi pharmaceutical sector, and other HHS staff has helped support the Ministry's increased emphasis on primary healthcare, including the establishment of quality standards in this area. As part of this primary care initiative, HHS collaborated with representatives from USAID, DoD, State, and the academic nursing community in a review of Iraqi nursing curricula, providing advice on how to raise the standards and numbers of personnel in this critical area as rapidly as possible. Longer-term solutions to personnel shortages are expected to require a combination of intensive re-training of existing personnel and calibrated restructuring of the medical education system, in which HHS also stands ready to assist.

While the WHO's efforts within Iraq were made considerably more challenging by its evacuation of foreign national staff members following the August 2003 bombing of the U.N. headquarters in Baghdad, the organization has continued to provide technical support for efforts to rehabilitate the Iraqi healthcare sector. In the immediate aftermath of the conflict, it collaborated with representatives from USAID, the World Bank, and the CPA on an assessment of immediate health needs within the country.

The WHO's early efforts were devoted toward limiting the potential for outbreaks of communicable diseases (for example, via the USAID-funded vaccine initiative mentioned above) and helping rehabilitate the healthcare system's technical infrastructure, including the national polio laboratory. In addition, the organization worked with the Ministry of Environment in rehabilitating water quality control centers and has provided a range of technical documentation in support of the Ministry of Health's strategic planning exercises and policy papers. Another major sphere of activity has involved arranging intensive training workshops for healthcare personnel both within Iraq and (to the extent that visa access has permitted) in other countries. These activities are continuing, along with additional programs in areas including food safety, drug quality control, obstetrics, mental health, and other non-communicable diseases, as well as intensive efforts to support a national strategy for the nursing sector.

The World Bank's involvement in Iraqi reconstruction projects to date has been primarily through the Iraq Trust Fund, which was created in the wake of the Madrid donors conference as a vehicle for overseeing the disbursement of financial donations from other nations. While the level of actual donations has not yet matched the amount pledged at the Madrid conference, it is estimated that around $400 million will have been received by the end of 2004. These donations will be directed into all sectors, including healthcare, in which the World Bank is overseeing grants for reconstruction and development. Among the earliest projects financed through the trust fund were emergency textbook purchases, the rehabilitation of schools, and other infrastructure repairs and improvements. In addition, because of the country's tremendous need for more skilled workers with experience in financial administration, procurement, and other areas of project management, the Bank has rapidly begun supporting training programs in these areas for Iraqi civil servants.

The Department of Defense coordinated medical relief efforts in the earliest period following the entry of coalition military forces into Iraq. It was greatly assisted by HHS, USAID, a number of international relief agencies, international partner organizations, and the Iraqi Development and Reconstruction Council. As additional civilian personnel arrived in Iraq to begin taking over relief and reconstruction work, DoD continued to play a facilitative role in these efforts, chairing the weekly inter-agency teleconferences where health-related policies were coordinated. Military personnel served on the team advising the Ministry of Health, and a group from the DoD Pharmacoeconomics Center was instrumental in helping set up a new pharmaceutical procurement and distribution system within Iraq. DoD also helped coordinate donations from external partners, such as the American Medical Association and Elsevier Foundation's provision of 50 tons of medical textbooks and journals. While primary responsibility for U.S. civil affairs in Iraq has now shifted to the Department of State, DoD is continuing to assist in healthcare reconstruction efforts.

The Future of Iraqi Healthcare–Planning and Prospects

Over the past two months, the Ministry of Health has been developing a comprehensive situation analysis document, which was to be presented at a two-day national conference at the end of August. The goal of the presentation was to yield general consensus on national health priorities and a pathway for meeting these challenges. The plans included in this document include a combination of proposals for new initiatives and activities that have already begun in some form. Some of these proposals are described here, along with an outline of current conditions within Iraq that are influencing the health of the population and the greatest areas of need.

Iraq is a country of around 27 million people that has a rapid rate of population growth amounting to about 3 percent annually. One third of the population lives in rural areas, and healthcare accessibility has also been affected by the intensive population movements of the past year, such as the large number of Marsh Arabs who have returned to areas of southern Iraq where health and education facilities are extremely limited.

Because of deteriorating health conditions within the country, life expectancy for the country as a whole has declined significantly in the past 15 years, from a high of around 66 or 67 years in the late 1980s to the most recent estimates of around 59 or 60. While prospects for economic growth appear to be good once the security situation improves, the current economic situation is very challenging. Unemployment, though declining in recent months, remains a serious problem, and poverty rates have risen over the past 15 years and are quite high. Educational levels have also deteriorated substantially over the same period. Iraq was ranked 76th in 1991 among countries in the United Nations' Human Development Index (a measure of life expectancy, education, and standard of living) but had dropped to 127th just ten years later.

Among the WHO's country measures, Iraq is identified as falling into stratum D (on a ranking of A to E), indicating that the country has high infant and child mortality combined with high adult mortality. Apart from the magnitude of these mortality rates, a major problem is that current death certification practices are very incomplete and inaccurate (and have been since the late 1980s), making it difficult to assess the country's health indicators more precisely or to determine what areas of health are in greatest need of attention. What is known is that respiratory infections and diarrhoeal diseases are major causes of death among children, and child and infant mortality rates have shown an especially pronounced rise since 1990. These trends are the basis for the priority accorded to child and maternal health in strategic planning, as it is hoped that such mortality rates can be reduced relatively rapidly through appropriate intervention strategies.

By the 1980s, Iraqi morbidity rates had moved well along the transition from a primary burden of communicable diseases to a primary burden of non-communicable diseases. Since that time, however, communicable diseases have risen sharply, including major incidences of diarrhoeal illnesses, respiratory infections, diphtheria, typhoid, leishmaniasis, and hepatitis. This disease burden is compounded by continuing serious incidences of non-communicable diseases, including cardiovascular illness, diabetes, and cancer. Cancer registration is very incomplete, although data is suggestive of recent increases in rates of leukemia and lymphomas; also, early detection efforts are rudimentary, meaning that cancers are most commonly diagnosed in late stages.

Non-communicable diseases overall probably remain the nation's leading causes of death, but systematic surveillance for such conditions is almost non-existent, giving the Ministry of Health little to work from in assessing determinants of health and planning intervention strategies. For this reason, establishing an effective national disease surveillance system is one of the Ministry's highest priorities.

While rates of malnutrition among children are probably better than they were 5-6 years ago, they remain significantly worse than they were in 1990. Undernutrition and malnutrition remain persistent problems among the population, even while obesity is now also beginning to be a concern. Iraq has a national food rationing system which has helped maintain nutrition in the population over the past 12 years. However, there have been problems with the quality of the food rations, which are low in some vitamins and minerals. This is a particular concern for the poorest segments of the population, who rely primarily on these rations and cannot afford to supplement their diet by purchasing adequate amounts of fruits and vegetables. A national nutrition policy has not yet been constructed, but discussions are taking place within the Ministry of Health about organizing such a framework in cooperation with the Ministry of Agriculture.

Reproductive health and environmental health are additional priority areas for the Ministry of Health. The most recent figures available for maternal mortality suggest that rates within Iraq have risen dramatically and are now more than 7 times as high as the maternal mortality rates in neighboring Jordan. Access to family planning services and rates of contraceptive use are also very low in comparison with neighboring countries. For environmental health concerns, which are a major contributor to communicable disease burdens in infants and children, the solution does not lie entirely within the Ministry of Health. The deterioration and destruction of water and sewage networks in recent years will require a great deal of effort and investment in order to be rehabilitated, and this work will need to be coordinated with other government ministries.

On a system-wide basis, there are major equity and quality problems in primary healthcare. The secondary and tertiary sectors have also seen severe deterioration. Even in what were once quite prestigious tertiary-care institutions, one is now often unable to find good basic care. One aspect of this decline can be seen in the state of physical infrastructure and scarcity of equipment. The results of surveys that were funded by USAID and conducted by the Ministry and Abt Associates suggest that around 60 percent of primary health centers require urgent repairs. In one survey, less than one third of primary health centers had adequately functional and relatively clean toilets, less than one third adequately separated medical waste from ordinary trash, half had no electrical generators, and 90 percent had no regular water supply. Even very basic medical equipment was alarmingly scarce. 50 percent of the centers surveyed were missing items such as stethoscopes, sphygmomanometers, otoscopes, and thermometers, whereas more specialized equipment such as gynecological tables and ECG machines were not available in more than 95 percent of cases. A separate task force that looked into shortages of pharmaceutical supplies found that for 400 of the 900 drugs they surveyed, there were no existing supplies. The list of missing drugs included basic items like beta-blockers, antibiotics, and drugs used in anesthesia. On top of these inadequacies in equipment and supplies, the health system faces serious problems at the management level. Health planning has been overly centralized and not based on reliable data, and there has been no regular system of monitoring and performance appraisal. Long-term improvements on a system-wide basis will thus also require strategies for improving management capacity.

In moving forward with the rehabilitation of the Iraqi healthcare system, one important responsibility is to quickly address some of the most urgent issues. Achieving at least a certain measure of rapid and noticeable improvements is important for meeting the expectations that Iraqi citizens have of the current government. These urgent issues include dealing with shortages of medicines, increasing investment in immunization campaigns, upgrading blood transfusion services, making improvements in maternal and obstetric care, implementing food safety measures, and tending to the most critical repair needs of primary health centers and hospitals. Systemic improvements are also needed in the pharmaceutical sector and in the development of disease surveillance and health information systems.

Even if large-scale progress in some of these sectors will require a substantial length of time, it is important at least to initiate elements of these programs rapidly so that a trajectory will be established and citizens will be able to see that improvements are being made.

Strengthening the management aspects of the healthcare system is another critical priority. Already the Ministry of Health itself has been substantially restructured, and the views of the governorates are now being sought in order to determine whether further modifications are desirable. The overarching goal is that the Ministry's management structure should appropriately reflect its long-term priorities and implementation strategies. Beyond organizational structure, one of the most fundamental needs is simply an increase in the Ministry's absorptive capacity for handling new projects. The size and complexity of reconstruction plans will pose an enormous challenge in terms of not only numbers of staff but also their ability to manage, monitor, and evaluate projects. For this reason, there has been a major focus on training individuals in financial administration, procurement processes, and other aspects of project management. The governorates will also need to be involved in this process, since the ability to decentralize healthcare projects effectively will depend critically on having appropriate management capabilities at the local and regional level.

In addition to management skills, other areas in which there is a pressing need for training and capacity building include public health, the medical education sector, and a range of specific clinical subjects. For both public health and medical education, the Ministry of Health will need to work closely with the Ministry of Higher Education in order to ensure that educational programs and school capacity are appropriately coordinated with national needs. A conference was planned for late August 2004 to begin the process of examining this relationship.

Finally, a substantial component of the Ministry's reconstruction plan revolves around estimating the country's healthcare budget needs and mobilizing the resources to match them. An initial report prepared by the World Bank and U.N. agencies suggested that around $800 million would be needed to rehabilitate the healthcare sector, but this is probably a gross underestimate. The Ministry now estimates that actual needs will probably run closer to around $1 billion per year over the next 4 years for physical infrastructure alone. Beyond that, there are huge needs for training and developing human resources. The Ministry's current $1 billion budget is sufficient to cover salaries, operating expenses, and pharmaceutical resources but is not enough for further investment in the healthcare system. The supplemental reconstruction funds from the U.S. will go a significant way toward making up the remaining shortfall, but additional resources will still need to be mobilized.

Lessons Learned

There was a general view among symposium participants that the sheer number and diversity of actors involved in reconstruction efforts amounted to both one of the biggest challenges and one of the greatest strengths of the overall endeavor. Interagency cooperation and coordination was considered essential for focusing efforts, balancing the needs and abilities of different groups, and sharing data and information under conditions in which reliable health data was sparse and data collection efforts were rudimentary. Each of the major actors worked to occupy a niche that would mesh harmoniously with the capabilities of other groups. Roughly speaking, the WHO and HHS were the major providers of medical and scientific expertise, the World Bank and USAID were the major sources of funding and oversight for reconstruction and rehabilitation projects, DoD had primary responsibility for initial stabilization efforts, provided a range of additional medical expertise and logistical support, and all of these units coordinated within the planning and administrative structures of the CPA and Ministry of Health. In addition, each of these organizations typically drew on support staff resources from outside Iraq. Symposium participants repeatedly cited the energy and skills of Iraq's own health professionals as being one of the most important factors in the level of progress that was attained over the past year.

Among the difficulties that were encountered, security issues obviously constituted one of the most substantial obstacles to work for all parties. These concerns resulted in the withdrawal of the WHO and World Bank's foreign staff from Iraq following the August 2003 bombing of the U.N.'s Baghdad headquarters, after which they managed their activities from outside the country. Communications within Iraq were often very challenging as well. While many agencies had good connections with their international colleagues from central offices, they often found that regular communications with individuals and facilities in different Iraqi regions were substantially more difficult owing to the lack of internet access, cell phone and teleconferencing capabilities, and so on. In place of electronic communications, there was often a heavy reliance on couriers and personal travel, which made the coordination of activities among multiple actors slower and more challenging. As training programs were made available for Iraqi personnel, the difficulty of obtaining visas for foreign travel was significant.

USAID representatives noted that their organization was historically most accustomed to dealing directly with host governments, which meant that building partnerships within the CPA and with other U.S. government agencies such as HHS was a learning process. In addition, because USAID was not accustomed to working within conflict zones, it took time to establish close working relationships with DoD and learn how to make optimal use of their assets. Another comment was that because they were more familiar with working in countries where extant professional capacities are extremely limited and often need to be constructed almost from the ground up, USAID may have initially underestimated the existing capabilities within the Iraqi healthcare sector. To the extent that it might have been possible to better plan for and take into account such extant capacities, it was believed that more rapid progress in some areas might have been feasible. Similarly, a WHO representative wondered whether it might have been (and might still be) possible to make more robust use of the expertise and capabilities available in nearby countries in the region.

Several symposium participants noted the difficult balances that had to be struck in a variety of areas. For example, rehabilitating the healthcare sector as a whole involves a combination of improving human capacity and rebuilding the physical infrastructure needed to support these personnel. Keeping these two sides of the rehabilitation effort phased together appropriately often requires coordinating projects that are being managed by entirely different groups. Similarly, when faced with a healthcare system in such an urgent state of disrepair, there is an understandable tendency to focus on short-term projects that can achieve quick results, even while there is a concomitant need to ensure that these short-term means are feeding into longer-term ends. Finally, the enormous need for new reconstruction projects and financial support, as well as the energy of different agencies and NGOs offering their services, has to be calibrated with the capacity of the Ministry of Health to effectively manage additional new activities. In all of these cases, the competing priorities are not either/or propositions. However, early and conscientious planning and monitoring are required in order to integrate all aspects of the rehabilitation process together and ensure that the varied strengths of different actors are jointly directed toward meeting the Ministry's objectives.

Coordinating Future Assistance–An Exchange of Perspectives

In an informal afternoon discussion session, invited symposium participants came together to assess the status of their ongoing activities and discuss how best to coordinate future efforts with the Ministry of Health's strategic goals. One of the overarching themes was a need to find ways of optimally coordinating the identification of needs by the Ministry of Health with the provision of assistance by other agencies and NGOs.

Representatives from the State Department noted that they are now striving to relate with the Iraqi government on bilateral terms that are similar to relations with any other sovereign state in as many respects as possible. The U.S. embassy in Baghdad is therefore structured on recognizably familiar terms—with an ambassador, deputy chief of mission, heads of represented agencies, and so on—with the exception that the number of represented agencies and the overall size of the country team is unusually large.

A distinctive structure that has been set up within the embassy is the Iraq Reconstruction and Management Office (IRMO), which is tasked with coordinating reconstruction projects through the supplemental funding that was approved by the President and Congress. IRMO thus includes a large project and contract office, as well as a sizable number of consultant advisors to ministries within the Iraqi government. It can also supply additional forms of technical assistance or consultants at the request of any of the ministries. While a fair number of staff positions at the embassy are still transitioning personnel, the working group on health is now operational and includes an attaché from HHS, who also serves as the health representative within IRMO. This attaché is the individual whom the Ministry of Health can approach with requests for health consultants or other technical assistance.

A review of the overall Iraq assistance budget is ongoing, both to adjust for any recent shifts in priorities and to take into account the vastly increasing security costs which have necessitated cutbacks in other areas. The original pledge when the first U.S. supplemental budget for Iraq was passed by Congress was that new funds would not be requested for Fiscal Year 2005. However, there remains a possibility that new funding could be proposed and approved for Fiscal Year 2006. In the meantime, the highest level of priority has been placed on moving forward with projects that have early projected completion dates. Other speakers noted that some of the delays in implementing projects have simply resulted from the amount of time it has taken construction firms and other businesses to get set up for operating within Iraq. With procurements now underway for many projects where contracts have been signed, it is hoped that more of these construction projects (including ones for primary health centers and hospitals) will rapidly start moving toward realization. Another speaker noted that using Iraqi contractors wherever possible was an effective way of trying to get more out of limited budgets.

There were discussions on a number of points relating to the possibility of bringing in additional sources of support apart from U.S. government funding. USAID noted that they are hoping to leverage additional funding from donors by agreeing to manage projects either directly or through some form of umbrella oversight structure with Iraqi ministries. Apart from foreign funds, others commented on the possibility of obtaining support from additional sectors within the U.S., such as private businesses or educational institutions. The principal issue in this case would be constructing a vehicle for coordinating such support, including both where and how the Ministry could express its needs and where and how potential donors could make their offers of assistance known. Currently, Don Eberly is serving the embassy as coordinator for donors from the private sector.

Other health-related activities from the CPA era are still ongoing. The bi-weekly inter-agency conference calls continue to take place and are now chaired by HHS rather than DoD. Minister Alwan requested that a representative from the Ministry of Health be included on these calls, and there was consensus agreement on the merits of this suggestion. The WHO is maintaining regular contact with Ministry representatives and continues to provide technical advice and documentation both to the Ministry and to medical schools and facilities within Iraq. In addition, the WHO is working to identify Iraqis from different health disciplines who can be awarded fellowships for studying abroad. Because of travel restrictions, WHO officials have relied heavily on virtual communications and meetings in nearby locations such as Amman for many of their activities.

The World Bank noted that over the past year it had not placed as high a priority on using the Iraq Trust Fund to finance physical infrastructure projects because of the expectation that bilateral donations might substantially fill this need. Rather than risk potentially duplicating other efforts, the Bank concentrated its initial efforts more toward capacity building activities. Now that the Ministry has articulated its long-term strategies and it is clearer what level of support can be expected from other donors, it is likely that there can be a shift into more traditional Bank activities such as funding infrastructure development. The good news is that in comparison with other areas where the Bank has worked, such as Afghanistan, Kosovo, and many post-conflict African nations, Iraq already has a larger base of skilled professionals and infrastructure that can be built upon.

On the other hand, in contrast to even the case of Afghanistan, Bank personnel are not currently permitted to work within the country on account of the security situation. The technical assistance that bilateral actors can provide will thus be crucial for supporting efforts within Iraq until the Bank's own staff representatives can again enter the country.

The Bank also remains open to considering mechanisms outside the Iraq Trust Fund for financially supporting reconstruction efforts, including the use of normal lending procedures. In order to be eligible for new lending programs, the most important pre-conditions would relate to the circumstances of the national government, repayment of past arrears to the Bank, and a security environment that permits Bank representatives to work within the country. Other Bank priorities for considering loan requests would be that projects under consideration should (a) be responsive to local needs and expressed priorities; (b) avoid overlap and duplication with other ongoing activities; (c) be relatively quick to design (rather than the timeframe of 1-3 years that is more typical of the project preparation phase for other Bank projects); (d) be of a design that is sufficiently simple not to overwhelm existing capacities; (e) be accompanied by appropriate capacity building efforts so that infrastructure is supported by matching personnel; (f) be proposed at an adequate level of funding to ensure that the results will ultimately be worth the project's effort; and (g) be sustainable over the longer term.

Speakers from HHS noted that while they have less funding to offer than other organizations, they have a wide breadth of technical expertise as a counterpart agency to the Ministry of Health in dealing with all aspects of national health policy. For example, HHS experience in managing programs like Medicare, Medicaid, and the Indian Health Service could potentially provide comparative examples for Iraqi needs relating to how to operate large-scale public-private partnerships. Similarly, the Veterans Health Administration is not only one of the largest U.S. procurers and distributors of pharmaceuticals and other medical supplies but is also one of the largest providers of graduate training in medicine. For this reason, it could offer a range of both managerial experience and pedagogical training modules, as well as a diversity of clinical expertise in high-demand areas including mental health.

Separately, one speaker noted that HHS had assisted healthcare professionals in Kenya and Tanzania in improving their first-response capabilities in the wake of the embassy bombings in 1998, when many trauma victims died before they could receive adequate treatment. HHS officials would be pleased to share what they learned from these experiences with their Iraqi counterparts. For any of these areas or others, Ministry of Health officials would be able to request information and/or consultants by contacting the health attaché at the U.S. embassy in Baghdad.

Apart from governmental programs, a number of non-governmental organizations and institutions stand ready to assist. A speaker representing U.S. medical specialty societies noted that the American Academy of Family Physicians has well-established short-course training programs which could be drawn upon, and the American Academy of Emergency Medicine was mentioned as another organization with numerous training modules available. Organizations such as these might also be able to support nascent professional societies for Iraqi physicians or other health workers, and as professional associations of long standing they would likely be able to sustain durable relationships with their Iraqi counterparts. As one speaker noted, it is one thing if a single physician volunteers to make his or her services available in some capacity, but there is another order of sustainability involved if the offer comes from an institution that already has supplies, training modules, or humanitarian programs in place and can potentially bear some of the financial burden for delivering their assistance as well. Medical schools and universities were also mentioned as potential candidates for twinning relationships with counterpart institutions in Iraq. It was noted that a request for proposals would soon be released for the Partners in Healthcare initiative, which is intended to facilitate the establishment of such ties between facilities and personnel in Iraq and other countries.

There were many occasions during both the afternoon discussion and the morning question-and-answer sessions when it was evident that numerous individuals and organizations are eager to find avenues to assist rehabilitative efforts. The consensus was that there was a strong need for a central mechanism for receiving offers of assistance, identifying the most viable possibilities, and coordinating these offers with the Ministry of Health. The Ministry similarly expressed an interest in a central database or office where it could make known its most pressing needs that could potentially be met through outside assistance. Several speakers counseled that in view of the volume of offers and the amount of time required for responding to and coordinating potential donors, the Ministry should be prepared to say "no" to even well-intentioned offers of assistance that do not fit within their strategic agenda. When harnessed appropriately, however, most offers have the potential to leverage the strengths of additional actors toward the common goal of producing a better, stronger healthcare system in Iraq.

Symposium Schedule

Symposium on Reconstructing the Healthcare System in Iraq:Lessons Learned and Future Prospects

August 11, 2004
Keck Center of the National Academies
500 5th Street, NW
Washington, DC 20001

8:00 Welcome and Introductions
Dr. Harvey Fineberg, President of the Institute of Medicine (IOM)

Reflection
Dr. Mahmud Thamer, Assistant Professor Emeritus, Johns Hopkins University School of Medicine

Introduction of the Minister of Health
Dr. William Winkenwerder, Assistant Secretary of Defense (Health Affairs)

Opening Comments by the Minister of Health
Dr. Ala'adin Alwan, Minister of Health, Iraq

8:20 Tackling the Iraqi Medical Sector Reconstruction
Dr. William Winkenwerder

8:40 Q&As/Discussion

8:55 The Ministry of Health Advisory Team: A Year of Progress
Mr. Jim Haveman, Senior Advisor, Coalition Provisional Authority

9:15 Q&As/Discussion

9:30 Break

10:00 Medical Sector Reconstruction: the Iraqi Perspective
Dr. Khudair Abbas, former Minister of Health, Iraq

10:15 Q&As/Discussion

10:30 Inter-agency and International Perspectives Panel (Facilitated by Dr. Harvey Fineberg, IOM)
Dr. David Smith, Director, Humanitarian and Refugee Health Affairs, HHS Headquarters
Mr. Gordon West, Deputy Assistant Administrator, Bureau for Asia and the Near East, USAID
Dr. Naeema Al-Gasseer, WHO Country Representative to Iraq
Dr. Jean-Jacques Frere, Senior Public Health Specialist, Middle East and North Africa, World Bank
Dr. David Tornberg, Deputy Assistant Secretary of Defense (Clinical and Program Policy), DoD

11:30 Q&As/Discussion

11:45 Break

12:00 The Way Ahead
Dr. Ala'adin Alwan

12:35 Q&As/Discussion

12:50 Closing Remarks
Dr. William Winkenwerder

Lunch

1:15 Gathering time, Room 110—Working Lunch

1:30 Welcome and Introductions
Dr. William Winkenwerder, Jr., Assistant Secretary of Defense (Health Affairs) - Confirmed

2:00 Major Issues Facing Iraqi Healthcare Reconstruction
Dr. Ala'din Alwan, Minister of Health - Confirmed

2:15 Relationship of U.S. Mission with Ministry of Health and Future Plans
Ambassador Robin Raphel, Iraq Assistance Coordinator, Department of State-Confirmed

2:25 USAID support of Healthcare Reconstruction
Mr. Gordon West, Acting Deputy Assistant Administrator, Bureau for Asia and the Near East, United States Agency for International Development

2:35 WHO support of Healthcare Reconstruction
Dr. Naeema al-Gasseer, WHO Country Representative for Iraq & UN Health Cluster Task Manager

2:45 World Bank support of Healthcare Reconstruction
Dr. Jean-Jacques Frere, Senior Public Health Specialist, Middle East and North Africa, World Bank

2:55 Department of Health and Human Services support of Healthcare Reconstruction
Dr. David Smith, Director, Humanitarian and Refugee Health Affairs, Health and Human Services–Invited

3:05 Open discussion
moderated by Dr. David N. Tornberg, Deputy Assistant Secretary of Defense, Clinical and Program Policy - Confirmed

3:50 Summing up—Dr. Tornberg

4:00 Informal Networking with Refreshments

5:00 Adjourn

Appendix G: Ministry of Health Projects Funded by U.S. Supplemental Appropriation

Throughout the year, the CPA team devoted intensive efforts to planning activities that resulted in approval of $793 million as part of the $87 billion supplemental U.S. appropriation. This $793 million was specifically provided to support Ministry of Health requirements. The impact of these efforts are interlaced throughout all areas of operation within the Ministry. The appropriation included the following specific items:

1. Renovation of 16 Maternal-Child Hospitals

- Major renovation/refurbishment of 16 maternal-child hospitals throughout Iraq–reflecting Ministry focus on reducing maternal, infant, and child mortality
- Funding: $257.7 million

2. Construction of Primary Health Care Centers

- New construction of approximately 150 new model primary health care centers throughout Iraq–reflecting Ministry focus on paradigm shift to primary health care
- Funding: $182.6 million

3. Hospital and Health Care Center Equipment

- Purchase and distribution of medical equipment for 16 renovated maternal-child hospitals and 150 newly constructed primary health care centers
- Funding: $128 million

4. Other Medical Equipment

- Purchase and distribution of medical equipment for national TB program, national blood services program, Iraqi Armed forces medical support, and general hospitals
- Funding: $130 million

5. Basrah Pediatric Hospital

- New construction of Pediatric Hospital in Basrah– reflecting Ministry focus on reducing child mortality
- Funding: $50 million

6. Ministry of Health Capacity-building

- USAID administered contract to bolster Minister of Health capacity in management of maternal-child health services and nursing–reflecting Ministry focus on reducing maternal and infant mortality.
- Funding: $25 million

7. Ministry of Health Training Programs

- Several critical training programs focused on nursing, primary health care and other technical assistance are in development with the Ministry of Health.
- Funding: $17 million

September 2004